

DOMINION DENTAL JOURNAL

(Official Organ of the Canadian Dental Associations.)



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VOLUME IX.

TORONTO :

THE NESBITT PUBLISHING COMPANY, LIMITED,
CONFEDERATION LIFE BUILDING.

1897.

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SIR EDWIN SAUNDERS

Dominion Dental Journal

VOL. IX.

TORONTO, JANUARY, 1897.

No. 1.

Original Communications

SIR EDWIN SAUNDERS.

In this sixtieth anniversary year of the reign of our beloved Queen, it occurred to us, that this JOURNAL might not inappropriately publish the portrait of Her Majesty's dentist, Sir Edwin Saunders. Apart from the distinction conferred upon him, Sir Edwin has been a life-long benefactor to the cause of dental education in England, and through his efforts and generosity, the present fine structure occupied by the Dental Hospital of London, and the London School of Dental Surgery, in Leicester Square, replaced the less commodious premises in Soho Square, and was opened in March, 1874, to which another wing was added, in 1883, by the munificence of Sir Edwin. The politics of dentistry in England demanded upon the part of a few gentlemen the most unwearied energy, not only in organization, but in defeating the faction which wanted free-trade in practice. When the editor of this JOURNAL, in 1868, established the first dental journal in Canada, Sir Edwin wrote him a kindly note of encouragement, and from time to time has shown an interest in the organization of the profession in this American outpost of the Empire. The photograph, which was sent personally to the editor, was not sent for publication, but we venture to believe that Sir Edwin will accept this Canadian tribute, in the same spirit with which he received the portrait now hanging in the hospital in Leicester Square. Through the distinction conferred upon him and the late Sir John Tomes, the dental profession has been honored, and enjoys in the presence of Her Majesty an equal social rank with medicine

and surgery. Sir Eric Erichsen, when presiding at the presentation of the portrait of Sir Edwin to the Dental Hospital of London, remarked that "Sir Edwin Saunders has well deserved the honors that he has gained, for he has not only secured—and was happy in so securing—at an early period of his life, the confidence of the most illustrious personage in this realm, but he has retained it, I may say, down to the very present time; and that honor which it pleased Her Majesty to confer upon him, might not only be considered a personal distinction, and a distinction conferred upon his branch of the profession, but also a mark of personal favor shown by Her Majesty to a trusted servant, and to one from whom she had received the greatest possible comfort and solace. But it had not been the lot of Sir Edwin Saunders merely to owe his position to the favor of princes—of whom it may be truly said, *Principibus placuisse viris non ultima laus est*. He has done much to deserve public gratitude and public favor outside of his profession."

PROFESSIONAL ENTHUSIASM AND PRACTICAL SUGGESTIONS.

By S. B. PALMER, M.D.S., Syracuse, N.Y.

To the readers of the DOMINION DENTAL JOURNAL, and professional brethren in Canada. The discharge of official duties in connection with the Board of Censors for the Dental Society of the State of New York for twenty-seven years has allowed me to become acquainted with a large number of young graduates who have presented diplomas, from various colleges in the Union, for certificates to register in the State of New York. This duty is now performed by the Board of Regents, under direction of the University of the State of New York, whose requirements are, that no one can matriculate in any dental college in this State without a four years' course in a High School, after January, 1897. Nor can any diploma be received from out of the State, for registration, unless accompanied with a like certificate of preliminary education. This is a progressive step to entitle the dental profession in the State of New York to rank with that of medicine. The acquaintances above mentioned have largely been with young graduates, and it is cheering to witness the student as he stands upon the stage to receive the diploma and degree, and farther on, when producing his qualifications and rights to a certificate for registration. The enthusiasm manifested on such occasions is not to be criticised—it is a natural stimulant adapted to that age and condition.

Schiller very aptly puts it in the following lines:

"Into life's ocean the youth with a thousand masts daringly launches;
Mute in a boat sav'd from wreck enters the greybeard the port."

The writer is mute in regard to instructing those of experience with his own, but we trust the younger members will kindly receive suggestions for practice from any and every source.

The first point suggested is upon the many ways of doing; and various results obtained. That is, in discussions much time is consumed and no point definitely settled because the conditions are lost sight of. Operative dentistry is a science. One simple canon put to practice would harmonize differences and present facts. "Under the same conditions, with the same materials, the same causes will produce the same effects." We will illustrate our teachings by practice.

More than a score of years ago, I commenced to reinsert gold fillings which had become loose or fallen out, most generally contour fillings in the incisors. It is practical and successful, and in teeth, as we often find in age where the structure is soft, a replaced plug will remain longer than a new one, because there will be no decay under a filling set in cement. Most failures occur from lack of cleaning the surface of the gold. Take any displaced gold filling and heat it—it will turn black from the carbon which coated the surface. The quickest method to clean, or most effectual because it gives a roughened surface, is to scrape the surface with an excavator or point of a finishing file. Unless the cement comes in contact with the gold, there will be no adhesion. The same treatment will apply to bands for regulating as well as for crowns.

The object of introducing this subject is that the inexperienced may understand that success or failure is the effect of causes which should be well understood, and thereby the evil avoided. There has been wide differences of opinions in relation to the use of gold for filling a class of teeth defined by the usual calcified teeth of children. Of course age does not determine the condition, only we find that at the age of twelve years teeth are not sufficiently calcified to warrant the use of gold, without a lining of some material that will supply the lack of the mineral element in the dentine. We find this condition at various ages up to twenty or more years. Knowledge and good judgment would teach any operator the folly of transgressing or violating a natural law, and the law is this: When the organic constituents of dentine are out of proportion to the mineral matter, to a degree that the filling is in contact with living tissue instead of normal dentine, that surface portion, by reason of thermal changes, becomes devitalized. Nature does not deposit lime salts to harden dentine in contact with metal, as it does under a nonconductor like gutta

percha, and what is the result? The lining thus devitalized becomes a field for culture of bacteria, etc., according to the doctrines taught by Professor Miller. It is well known that the writer holds to views, which have been set aside by the declaration of the highest authority in the world. There is no conflict in science. I give hearty endorsement to the general teachings as to the cause of dental caries. It is well known that the writer has advanced ideas respecting secondary decay, or decay around gold fillings, or, in other words, that gold exerts electrolytic influences, by which the lime constituents of dentine are dissolved prior and independent of the process of fermentation and the production of lactic acid by micro-organisms. This belief comes from experiments scientifically conducted upon another phase of conditions with results true to the circumstances; they do not conflict with other investigations, but are pronounced as without foundation. This, however, is of little moment and not worth mention at the present time, except as mention may be made of principles belonging to this theory that have been declared without foundation. The practical benefit of mentioning the treatment of teeth that must be filled with gold, where time or circumstance would prevent the better way of first filling with gutta percha, is to line the walls of the cavity with some nonconducting material such as chlorobalsam or other hard varnish and cement, such as used for setting crowns. The object of this lining is to fill the tubuli and roughened surfaces of the walls, of the cavity with a material which will fill the minute spaces into which gold could not be forced. We have already mentioned the effects of leaving the cavity walls as might be done safely with normal dentine; that is, the devitalized surface decomposes, which process is carried on by the united effects of electrolysis and fermentation. Every observer knows that the dentine becomes more quickly inflamed under a loosened gold filling, than it would with a loose pellet of getta percha or vulcanite. We have found at the close of a day's work that a gold filling had started from its anchorage. On return of the patient the next morning the dentine was exceedingly sensitive. Had the filling been tin, very little chemical change would have occurred, or even cotton without medication would have saved much sensitiveness. Right here comes in the other force of lactic acid from micro-organisms. In either case one remedy will answer, namely, insulation, or in the case of normal dentine, a perfect filling. First let us consider varnish, which may be used under any gold filling except upon enamel where contouring is necessary. Varnish is not admissible upon enamel, that is, the gold has no mechanical bite, but slides and allows the filling to crumble. Before leaving this lining, there is no place where it does better work than under gutta percha. It is not necessary to have the varnish dry in any case. When gutta

percha is placed in a lined cavity, each piece becomes cemented to the place, the surface of the warm material unites with the gum, and the heat also forces the melted lining into every fissure or scratch in the dentine. When such fillings are removed the lining is the last that remains to be scraped away. The same insulation is practical under amalgam, as it prevents discoloration of the dentine and enamel, also chemical action upon the plug which comes in contact with the dentine. Again, its use is indicated where the dentine is inflamed or in close proximity with the pulp. The crowning principle is this, without moisture there can be no microbes, no galvanic current, no decay. The next and not less important foundation for fillings is cement, zinc phosphate, etc., which is indicated specifically as follows: As a lining or compound filling under amalgam, for shallow buccal cavities to be faced with amalgam, as anchorage for gold fillings in teeth with frail walls which would not bear solid all gold fillings. In accordance with the law given at the introduction, each condition demands special treatment to insure positive results.

I find that this article is already too long, and I will close by repeating that in all operations try and get definite ideas of what is needed to be done, know and remember how it was done, and also note the results. Let science be your guide; with care, thought and close observation you will be able to materialize theories into facts.

METAL PLATES.

By L. P. HASKELL, D.D.S., Chicago, Ill.

In response to your request for an article, I hardly know what to write about, as you have given me no text. Perhaps the subject above indicated will be profitable, in view of the vast amount of injury done to the alveolar process by the retention of undue heat, owing to the non-conductibility of rubber, of which I have been a close observer since its introduction about thirty-nine years ago, having previously had thirteen years' experience in metal plates. As aluminum is now so cheaply produced, and making as it does a rigid, light, cleanly, unobjectionable plate, there seems to be no reason why any patient should wear rubber for *permanent* work. Not only this, but better results in fit and adhesion can be obtained in difficult cases than in the use of rubber.

A plaster impression I hold to be indispensable in all cases. It must be taken high over the cuspid eminence, as plates should be higher, and gum fuller, here, in all cases, than elsewhere, in order to restore the contour of the lips.

No air-chambers are needed, but as the centre of palate is hard, and the only portion of the upper jaw which never changes, while the process to a greater or less extent absorbs, a "relief" should be placed over the hard centre to prevent at present, or in the future, rocking of the plate. This consists of a thin film of wax extending well up near the margin of ridge and the edges, chamfered thin so as to leave no evidence of it on the plate. This is the only change I make in the model. The sides of the model should be flared so it will deliver itself readily from the mould.

The sand should be oiled, for then it can be used many times without re-oiling and so is always ready for use; and there is no danger of holes in the die, from the presence of steam, as when water is used for moistening. Use a large flask for moulding so as to have plenty of room for packing. This can be made of sheet-iron, four inches in diameter and three in depth.

Babbitt metal is the only alloy which has all the qualities necessary for a dental die, viz., non-shrinking; sufficiently hard not to batter; tough enough not to break; and a smooth surface. The proper formula is copper, 1 part; antimony, 2 parts; tin, 8 parts. This can be had at all the dental depots. Nothing has so simplified the *fitting* of metal plates as the use of this metal, as forty-five years' use has demonstrated.

As pure lead cannot be poured upon Babbitt metal without danger of adhering to it, the melting temperature is reduced by the addition of tin—5 parts lead, 1 part tin. Coat the die with whiting, and stir the metal until it begins to thicken, then pour quickly.

Oil the dies to prevent the metal from adhering to the plate, being careful to wipe off all traces before annealing again. Aluminum is annealed by holding over a Bunsen flame until a pine stick chars on the surface. It should be used not less than 24 guage up to 22.

By the use of the "loop punch" the rubber is held firmly to the plate. The plate should be tried in the mouth before arranging the teeth, to be certain that it is all right. Be sure it presses up closely at the rear so the air cannot get under it.

The teeth should always be arranged by the mouth, and remembering that there are more failures from faulty articulation than from all other causes.

SUGGESTIONS.

By G. LENOX CURTIS, M.D., New York.

In making a diagnosis, it should be remembered that similar symptoms may indicate vastly different diseases, and that two causes may exist with apparently the same symptoms. One found, treated and cured, lessens the disease, but by no means eradicates it.

The cause of bad and offensive breath, the purulent condition of the gums, is often taken for rhinitis, and treated as such, without favorable results, when, in fact, it is due to caries, abscessed teeth, antrum disease and necrosed bone. None better than the dentist is able to diagnose such complaints, and all such patients should be sent to him for examination. His constant working in the mouth makes him master of these affections, and many a tooth which the physician condemns to the forceps would be saved if left to his judgment. I am well aware that in the country village where there is no dentist, physicians are called upon to extract teeth, some doing so indiscriminately, and often, I am compelled to say, just for the fee. If the course in our medical colleges included lectures on diseases following affections of the teeth, the importance of saving them, and their bearing upon the physical health of the patient, it would be a great boon to suffering humanity, increase the usefulness of the physician, and reflect credit upon the schools. I do not mean here a course in dentistry, but the teaching of oral surgery, as the former should be left for the dental colleges. In the human economy there are no superfluous organs; all are intended to last a life-time, and in this day, as well as in generations past, we require all our teeth for perfect mastication, and for the articulation of speech. There is nothing more distorting to the contour of the face than the loss of teeth and wearing illy designed substitutes. The physician who attempts curing indigestion, dyspepsia, anæmia and the like, where there is improper mastication of food, the mouth bathed in filth from caries and abscessed teeth secreting pus, where the gums are inflamed and diseased from the lack of cleanliness, is working against hope, and does both himself and his patient great injustice.

How many cases of offensive breath that obstinately resist treatment, come from these sources, especially from the diseased antrum, caused by abscess from diseased teeth! The physician should as conscientiously examine the mouth of every patient when he is considering the general health, or in case of any cranial symptoms, like neuralgia, as he would take the temperature or the

beat of the heart. I believe that fully 90 per cent. of diseases of the face and neck are traceable to affections of the teeth. Facial neuralgia, aptly termed the "devil's disease," nearly always, is due to this physical condition, being rarely ever cured from the internal application of medicine. Only recently I was called to diagnose a case of obstinate, purulent discharge from the nose, which for seven years had baffled continuous treatment from the surgeon, physician and nasal specialist. My diagnosis of double antrum disease was based on finding two abscessed teeth on either side of the mouth emptying into their cavities. Within five minutes, by use of a trochar and canula, I was able to draw away fully two ounces of as offensive pus as was ever met with. There no longer remained doubt as to this being the cause of her years of torturous treatment and sickening breath.

How quickly a dentist would be censured for invading the domain of the medical fraternity by treating a case in general practice, and why should not a physician be condemned for pulling a diseased tooth which could be saved? Would he be justified in beauty cutting off a finger because of a felon?

In a recent visit among the *habitants* of Canada, my attention was called to the pale faces and the poorly nourished physique of many of the women, both old and young. Why was this? An investigation showed that the knight of the forceps had not been idle. He had made frequent rounds and with disastrous results. Here was a clue to follow, and many a tale I listened to, where the bucolic dentist of the farm-house had plied his trade, emulating the village physician, in the joint effort to ruin the facial beauty of the fair sex.

An interesting case bearing on this subject is one occurring in the practice of Dr. J. J. Stowell, of Pittsfield, Mass. Preceded by severe pain in one side of the face which extended to the eye, neck and arm of the affected side, which was followed by paralysis of the arm and strabismus in that eye. Physicians were consulted both in New York and Boston, and for many months the patient was under their treatment, all the while complaining of the pain in eye and face, with a dead, heavy feeling on that side of the head. An oculist, of no mean repute, insisted upon "clipping" the muscles of the affected eye. This not correcting the trouble, glasses were fitted, but all of no avail. For more than a year continual treatment of the eye, accompanied by medicine for general health, was continued until the patient was nearly exhausted physically as well as financially. At that time having to go to Dr. Stowell for dental treatment, he at once found the cause for her long suffering, and why the physicians were at fault. He offered his services, and in one minute's time the cause was removed by the extraction of a partially erupted wisdom tooth,

which, having abscessed, diseased the jaw, so that a large sac of pus had formed. The pus had flowed copiously. In two weeks' time the patient was well, arm and face in normal condition, while for a time all pain was gone. Then came the trouble caused by the clipping of the muscles, which is well known to oculists, and most difficult to overcome. She almost completely lost the use of that eye. On learning what the dentist had done, the oculist, so the doctor tells me, wrote him a most abusive letter, setting forth that he had grossly interfered with his practice, and in so doing had been most unprofessional. Is not this another and most striking plea for more thorough teaching in medical institutions? Like money, teeth are most appreciated when lost. Good teeth is good health.

30 West 59th Street, New York.

TWO CASES OF ALVEOLAR ABSCESS.

By A. H. BEERS, M.D., C.M., D.D.S., Cookshire, Que.

There is nothing remarkably wonderful in these cases, but they may prove interesting to some of the DOMINION DENTAL JOURNAL readers.

The first is a case of neglected abscess, allowed to open externally. A girl, aged eighteen years, presented herself, complaining of general jaw-ache and neuralgic pains radiating over left side of face and head. There was a large indurated mass about the angle of the jaw, with the large opening of a sinus through which a sero-purulent fluid was discharging. The acrid discharge had caused a dermatitis of face and neck. This state of affairs had existed for *two years*. She had this mass decorated with a piece of pink court plaster, which she frequently changed, and was donned for her appearance in public. At home she had been poulticing it for a considerable time, and was evidently perplexed at her lack of success in curing the discharge.

On examining her mouth, I found an extraordinary filthy state of affairs. The roots of the lower twelfth year molar of same side, were completely hidden from view by the congested and hypertrophied gum. After much difficulty, I succeeded in extracting these roots, ordered an antiseptic mouth wash, after syringing the parts with a warm solution of boracic acid, and stopped the poulticing. After touching exuberant granulation about the orifice of the sinus with copper sulphate, I applied a dry dressing.

The patient was considerably run down and anæmic—undoubtedly due to the discharge which had lasted so long a time. For this she was put upon iron and cod liver oil. Three weeks afterwards I saw the patient again. All pain had disappeared, the sinus had closed up, and her general systemic condition was improving. There is left a puckered and disfiguring scar, probably for life.

The second case was that of a little girl of eight years. The popular idea that a tooth should not be extracted when the face is swollen, was responsible for the greater part of her suffering. Her parents belonged to the class who persistently neglect their own and their children's teeth—considering it a nuisance to get them, to have them, and to get rid of them. There was a tense swelling the size of a lemon, extending over and beneath the body of the lower jaw on left side. On palpation, fluctuation was distinctly felt. She had difficulty in opening her mouth. Intense pain in jaw and general feeling of malaise. Her breath was very fetid, tongue coated, temperature 101° . A lower six-year molar was the cause of the trouble, which I immediately extracted. There was no sign of abscess sac about the root, nor could I get any flow of pus into the mouth by probing the socket, so decided that the suppuration was deeply seated in the jaw. Cold cloths were prescribed externally, and a solution of boracic acid, as hot as could be borne, to be held in the mouth. The next day the external swelling showed no signs of abating, but was rather increasing, if anything. After carefully cleansing the face, I made an incision, deeply into the most dependent part of the swelling, taking care to avoid the facial artery. Directly an abundant flow of pus appeared, and she exclaimed at being at once relieved of the pain. After syringing out the abscess cavity, poultices were applied for that day. The next day the poulticing was discontinued and a dry dressing applied. Everything progressed favorably, the scar left being linear and hardly perceptible. If it had been allowed to go untreated much longer, there certainly would have been a more disfiguring result, as in the former case.

Correspondence.

OUR CHICAGO LETTER.—No. 1.

By C. N. JOHNSON, L.D.S., D.D.S., Chicago.

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—Your request for a Chicago letter would assuredly have been met with a sugar-coated refusal, on the plea of a never-ending routine of other duties, had it not been for two things. First was the feeling, that it would be ungracious to refuse anything to a man who had done so much for dental journalism, dental legislation, and dental education in Canada as you have; and second, the sentiment of a fellow-feeling in the matter. Your correspondent, in his association with dental journalism, has oft and anon been faced with the problem of obtaining something to fill his pages, and he knows full well the sense of gratitude that wells up in an editor's heart, (and editors have hearts, despite all preconceived notions to the contrary) when somebody says "yes" to his requests. So here is your Chicago letter, such as it is, and, as the bad boy said when he handed an India-rubber counterfeit of a plug of tobacco to an innocent Dutchman, "May you chew it to your heart's content."

Speaking of dental journalism, did it ever occur to you—but of course it did—how much work the average editor does without remuneration? At night—for it is mostly the busy fellows who edit journals—while others are reading, or attending the theatre, or going out in society, or mayhap playing billiards or whist, this pusher of the blue pencil is worrying his brain over a mass of mangled manuscript, or grinding out material of his own for that precious little imp, the printer's boy, who is sure to be found forcing his ink-besmeared anatomy into the editor's office the next morning asking for "copy." Then the proofs. It is vain imagining to think of depending altogether on some one else to read proof. The editor is by tradition held responsible for all the errors that appear in his publication, and if he trusts to an assistant to do the proof-reading, he will one day be made to blush, by seeing some absurdity staring at him in cold type in the journal which contains his name as editor. Then there are the complaints of contributors and readers. The editor must be thick-skinned as to his own feelings, and thin-skinned as to the feelings of others, if he expects to get on reasonably well with his constituents. Altogether the position is one of care, work and worry, and yet it would seem that there must be something fascinating about it, for

we seldom find a man who has once edited a journal subsequently resting content in retirement. It may be that the habit of drudgery fastens itself upon one as tenaciously as any other habit, and that the ex-editor can find nothing outside of editing which so completely fits his capacity for drudgery.

Be that as it may, we should be duly thankful that there are to be found in the profession men who, like yourself, are not only capable of doing, but are willing to do, this work ; dental journalism has accomplished much for the profession. And I know of no country where there is a greater field or a greater need for dental journalism conducted along proper lines, than in your own dear old Dominion. Your young men are for the most part starting out in the profession with a good fundamental education, and this in great degree equips them for writing and makes them prospective contributors. I trust, Mr. Editor, that you may succeed in what I know has been one of your hobbies in the past—the enlistment of many of these young men into the ranks of dental contributors. They owe it to you as a pioneer editor, and to the reputation of Canadian dentistry, to so fill your pages with good material, that the DOMINION DENTAL JOURNAL will rank among the best of its kind in the world.

But, bless me, here I am running on about dental journalism in Canada when the thing you asked for was a letter relating to Chicago affairs. A word or two about our dental societies may prove of passing interest to your readers.

Chicago has at present the following : Chicago Dental Society, Odontographic Society, The Hayden Dental Society, and The Odontological Society. A year or two ago there were also in existence The Chicago Dental Club, and The Atkinsonian Dental Society. The club was scarcely ever a club in the true sense of the term. It was much like any other dental society, except that it drifted in the direction of introducing subjects for discussion which had a medico-dental leaning. Papers were frequently read by medical men, and the leaning in some of these papers was—not to attempt to pun—nothing much but lean. The result of these experiments tended to prove to those who suffered under the infliction, that the average medical man, broad-minded though he may be, is not calculated to teach dentists much about dentistry—not much about the region of the mouth. I well remember one evening, when a respected member of the medical profession read a paper on some such topic as “Neuralgia of the fifth nerve,” and after several of his dental friends had quite freely discussed the subject he arose and said : “Gentlemen, I am slightly disconcerted. I came here expecting to throw some light on this subject, but I have been met considerably more than half way. Some of you gentlemen taught me more than I ever knew before in regard to

this ailment, and I simply wish to take off my hat to you fellows." I have often wondered since then whether the average dentist, if placed in a similar situation, would have been broad-minded enough to make so frank an acknowledgment.

Well, the interest in the meetings fell away. Some enthusiastic member would occasionally give it a convulsive spurt by reading a paper on the needs of the society, but the old wheel-horses got to shaking their heads. They were discouraged. At every annual election some victim who had not been in the habit of attending the meetings, and knew nothing of the dry rot working in the society, would be mustered in and elected president. The new incumbent would set sail to revive the society with all the fervor of a raw recruit, but by the end of a year he was usually as sick at heart as the sickest of the lot. This went on for some years, when one day the society simply slept away. It passed out so quietly and peacefully that very few knew it was dead. It seemed that there had been so little life left in it that it caused no convulsion when the final kick came. Peace to its ashes. It was not always peaceful when alive.

The Atkinsonians were a little coterie of congenial spirits who met monthly and dined. While dining it was their habit to discuss all sorts of topics from eatables to ethics. I remember, that in the early days of the organization, the subject of ethics was taken up regularly at each meeting, and vigorously discussed from as many points of view as there are to a star-fish. This progressed for more than a year, and the announcement is here made public for the first time, that the question of ethics was just about as near a solution when we were through it as it was when we began.

The Atkinsonians were finally merged into the Chicago Auxiliary of Delta Sigma Delta, a Greek-letter college society, having a representative membership throughout the United States. Meetings of the Auxiliary are held every two months, and an evening of royal, good entertainment is enjoyed. But this, Mr. Editor, is a sufficient trespass upon your space for one letter, and I must leave a further consideration of the subject for a future issue.

HINTS FOR MEDICAL PRACTITIONERS.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—I am very glad to learn from you in person, that you propose making some special effort to draw the attention of medical men and medical journals, to the functional importance of the teeth, and the duty they owe to us as a distinct profession, though not by any means an entirely separate one, of recognizing the use

we can be to patients who have, or who may have, various diseases of the teeth and gums. Now to make the department you propose of practical value, it must have the co-operation of dentists. How can we co-operate? Whenever, for instance, any article relating to this new department appears, it is very easy for the dentist to loan the journal to physicians in his locality. I feel sure that very few of them would not appreciate it. The few of them who are superior to further education are of no consequence. The large majority are only too anxious to know anything which will enable them better to serve their patients.

Yours, L. D. S.

Question Drawer.

Edited by DR. R. E. SPARKS, Kingston, Ont.

Q. 27.—Has the moon's phases any influence upon animal tissue? Would the fit of a set of artificial teeth be in any way affected by such influence?

A.—The moon's phases have no more influence on animal tissues than they have in the production of lunacy; and the fit of a set of teeth is no more affected by the moon than the fit of a coat. Every person is affected more or less, consciously or unconsciously, by variations in the temperature, pressure and composition of the air; and the nervous system, and fine nerve terminations are naturally the first to suffer from such variations, but the moon has no known effect upon the human body.

A. P. KNIGHT, M.D.,
Prof. Animal Biology, Queen's College, Kingston, Ont.

Q. 28.—It often happens that upon removing pulps that have had arsenical applications, it is found that near the end of the root or roots, the nerve is extremely sensitive. This is particularly so in the case of molar roots. What is the best method of treatment?

Q. 29.—What is the best treatment of toothache and neuralgia so frequently found in pregnant females?

To the readers of the DOMINION DENTAL JOURNAL:

We have just concluded a two years' experiment of the Question Drawer. The result has not been encouraging to a very high degree. It was thought that the opening of the department would call forth a perfect fusillade of enquiries regarding vexatious matters which crop up in every-day practice, and that these enquiries would elicit answers from many who might be willing to help a perplexed brother, but who might not be inclined to select

a subject and write an article on it for publication. Our duties, in taking charge of the department, were only supposed to be to arrange those questions and answers for the publishers. This has been a pleasure when there has been any arrangement to make. For some months our duties in this respect have been very light. Indeed, so little interest was manifested by the profession that we asked the editor-in-chief to close the department, or give it into other hands who might make it a greater success. He has urged us, however, to continue another year.

Realizing what a benefit it would be to the profession if only interest enough were taken to ask and answer questions, we have consented to do so. Let us have questions on all practical subjects connected with our profession, and answers to all practical questions. Let us help to make ours one of the foremost dental journals.—ED. Q. D.

Translations

FROM GERMAN DENTAL JOURNALS.

By CARL E. KLOTZ, L.D.S., St. Catharines.

EUCAIN IN DENTAL PRACTICE. (By Zahnarzt Louis Wolf, of Berlin, in *Zahntechnische Reform*).—Prompted by the well-known report of H. Kissel, dentist, of Berlin, on eucain, I have undertaken to experiment largely with this new local anæsthetic in my practice, where I have abundant operative material to give it a good and fair trial. I consider it the duty of every dental practitioner to try to test such new remedies as tend to alleviate the pain of dental operations, and to do away with the use of narcotics, such as chloroform, ether, bromether, etc.

Following the information of Dr. Kissel, I injected 1 to 1½ g. of a 10 per cent. solution of eucain at one time. This was sufficient to extract five contiguous roots in the lower jaw; in extracting the sixth root, pain was felt. No unpleasant after effects were noticed; that is, such as would appear immediately after the injection or operation, but the patients complained of œdema. My efforts were now directed towards finding ways and means to overcome this difficulty, in which I have been successful, as will be seen farther on. As I took it for granted that the swelling was due in part to the quantity of eucain solution in a single vesicle on the gums, I tried the method of injecting a small quantity at each root or tooth, particularly in such cases where a number of teeth had to be extracted, and which were not adjacent, but scattered.

Although the swellings were not nearly so large, still they were present. In the course of my experiments with about two hundred cases, I have come to the conclusion that, if the gums are thoroughly disinfected before injecting, which may quickly and easily be done with peroxide of hydrogen, and after the extraction to prick the gums with the point of the syringe and by pressure of the finger remove the liquid, then very little swelling will appear.

I have used eucain for the extraction of all teeth in both upper and lower jaws, preparatory to inserting an entire set, and the results as to the anæsthetic effects were in every respect all that could be desired.

In about two to five minutes after the injection of 0.3 g. for the extraction of a tooth, the patient feels a numbness of the part injected, and has the sensation that the injected part is insensible, also has perfect confidence in its anæsthetic effects.

In a great many cases where I was in the habit of using chloroform, I now use eucain. In one case, for the extraction of one tooth and fifteen roots for a lady patient, I used altogether 3.5 g. of a 10 per cent. solution. At this time I did not know that the maximum dose was 3.0 g. *pro die*, and which I overstepped by 0.5 g. The patient's head felt benumbed, which lasted only for a few minutes; this little disturbance was so slight that the patient declared she would much rather endure the slight headache, than the disagreeable after effects of chloroform.

Very noticeable was the effect of eucain in a case where I intended to extract thirty-one roots, but after I had extracted nine of them, I had to stop, as the patient became uncommonly frightened and nervous. After three days she came back of her own free will, so fully convinced of the effectiveness of the eucain that she had the remaining twenty-two roots extracted at one sitting, for which I used 3.1 g. eucain. The swelling in this case lasted for three days and then gradually disappeared. Notwithstanding the small quantity of 0.3 g. for one, or 0.4 g. for two adjacent roots, I can always fully anæsthetize the parts with it. In extracting, the patient experiences the sensation of touching the tooth with a steel instrument, and of lifting it out of its socket, but feels no pain whatever.

Quite recently I had a case of extracting ten teeth for a patient whose development, both bodily and mentally, was retarded through scoliosis, and dreaded an operation of even one tooth. After considerable persuasion, she submitted to the extraction of one root, for which I used 0.3 g. eucain, and this was so successful that she submitted to the extraction of the remaining roots without any hesitation.

In another case, fourteen teeth were extracted in one sitting, for the painless extraction of which the patient expressed his gratitude.

A physician for whom I used the eucain for the extraction of a tooth, stated that he will never have any other anæsthetic used in future.

I have found in unintelligent female patients a certain amount of distrust or suspicion towards all new remedies, and have frequently seen the patient's companions, who accompanied them to the office, and whom I had asked to be present and witness the operation, shake their heads in astonishment as I extracted root after root in quick succession, without the patient showing the slightest symptoms of pain by either sound or mien.

While I was still experimenting, I had occasion to visit the place of manufacture of eucain, and was informed that recently eucain was prepared which was free of methylalcohol, and that to the presence of this methylalcohol might be attributed the swelling after injecting. Since using this new preparation, I have not had any complaints about œdema, not even in the last cited case of the extraction of fourteen roots. But I do not know whether I shall attribute the non-appearance of the swelling to the absence of the methylalcohol or to my method of removing the eucain solution from the gums by pressure after extraction.

The eucain not containing the methylalcohol has a little drawback, inasmuch that it crystallizes slightly at the margin of the solution on the bottle. It would be advantageous, therefore, if it could be placed on the market in a prepared solution of 1 to 10, similar to the solution of cocaine used for injecting.

I have never noticed any acceleration nor diminishing of the pulse, and dizziness, fainting or nausea have never appeared, not even when the maximum quantity, 3.0 g., was injected.

In conclusion, I can only repeat that I consider eucain as a valuable adjunct to our armamentarium, and in my practice it will completely displace chloroform and nitrous oxide.

The advantages of a local over a general anæsthetic are apparent. How unpleasant very frequently in a chloroform narcosis is the excitation or vomiting, and how very unsatisfactory sometimes is the operation with nitrous oxide, when one must extract rapidly, so as to complete the extraction before the patient awakes from the effects. Bromether is also unpleasant on account of its odor. And last, but not least, is the advantage of not having to make an appointment with a physician to administer a narcotic, and many a practitioner has had the experience that the patient out of fear did not keep the appointment. On the other hand, with eucain one can proceed with the operation without anxiety, as I judge the anæsthetic effects last about from ten to fifteen minutes.

I am very grateful to colleague Kissel for bringing this matter before us, and I shall continue my experiments with eucain both in my clinics and in my private practice.

I will report later any new, interesting and uncommon cases.

Dr. Heller (in the *Deutsche Monatsschrift für Zahnheilkunde*) says that the swelling after injecting eucain mentioned by both Drs. Kissel and Wolf, will always appear, and cannot be prevented by antiseptic precautions. It is also the same whether one uses eucain containing methylalcohol or eucain not containing it, and pricking the gums and pressing out the liquor does not prevent it. He also draws attention to the pain that regularly occurs when injecting eucain into the gums. A great advantage eucain has over cocaine is that it is effective in periostitis, where cocaine has failed in the majority of cases.

Dr. Ahrenfeld (*Rundschau*, No. 220) reports over 250 cases in which, with one exception, he extracted the teeth without pain. He thinks that the swelling can be prevented by using a minimum dose. After a great many experiments, he has found that 0.3 g. of an 8 per cent. solution is sufficient.

[I have used eucain in my practice only for a few weeks, and am very favorably impressed with the results. The indications are that I will also use it in place of chloroform or nitrous oxide where the patient will agree to it, for being a new remedy, it is very difficult to convince some patients that it is as effective as chloroform. It certainly has a great advantage over all other local anæsthetics, as a greater area is affected with it than with any other, hence more teeth can be extracted with one injection. I have not used it long enough to mention any particular cases. The slight swelling I have noticed; one occurred in the extraction of an abscessed root, when it lasted about forty-eight hours, which was the longest duration of any I had, but the patient suffered no inconvenience from it. —CARL E. KLOTZ.]

FROM FRENCH JOURNALS.

By J. H. BOURDON, L.D.S., D.D.S., Montreal, Que.

AMALGAM OF ALUMINUM.—Dr. Carroll has compounded a new amalgam, which he has presented to the New York Society. Its superiority, he claims, over others would be that it does not retract its density, hardness, and does not oxidize. He made the following experiment: Made several fillings on extracted teeth, which he placed in a box, with a silver coin and a rubber eraser. The fillings were remarkably white; as for the coin, it was black, on account of the sulphur contained in the rubber.—*Zahntechnische Reform*, from *l' Ondontologie*.

TO TAKE AWAY ODOR OF IODOFORM.—All persons using iodoform know how difficult it is to remove its odor from the hands, or from instruments. Use spirits of turpentine on the hands or instruments ; it can be added to water, and in using soap, makes it very efficacious.—*Le Progrès Médicale*.

BARBER OF THE STRAND.—Paul Baron, 164 and 47 Strand, London, and William Browett, an employee, had for some time the habit, after giving their client a shave or hair-cut, of suggesting to him to have his teeth cleaned ; and after the operation would ask an exorbitant price. The case was brought before the court, and both Baron and Browett were given fifteen months and twelve months, respectively. It served them right.—*Odontologie*.

STATISTICS OF ANÆSTHETICS (By Dr. Gurtl, of Berlin).—From 1890 to 1893, chloroform given 166,812 times caused 63 deaths—1 out of 2,649 ; ether, 26,320 times, 2 deaths—1 out of 13,160 ; ether and chloroform mixed, 8,014 times, 1 death ; compound with alcohol, 4,190 times, 1 death ; bromide of ethyl, 7,541 times, 2 deaths—1 out of 3,770 ; nitrous oxide, given in large quantities, no deaths. In 1885, death from chloroform, 1 out of 1,946. Having used chloroform made by Pictet, it is purified at an exceptional low temperature. Most of the deaths are due to impurities that are found in ordinary chloroform. There is a tendency in Germany to use ether. This year 11,600 administrations of ether were given to 6,200 last year, although every author signalizes the danger of giving ether in causing hyperæmia, bronchitis and pneumonia.—*La Odontologia*.

DENTISTRY IN JAPAN.—Japan has numerous dentists, as well as native ones, who are very successful. A dental department is attached to the Medical Imperial University of Tokio. This town contains fifty-six dentists, having each four to twelve students, following every operation. The peculiarity in having so many students is this : One will work the dental engine, another work the syringe, and the third one prepares the gold foil. This division of operative dentistry is altogether scientific. Many Japanese are graduates of our American dental colleges, and are very skilful. Japanese are very fond of having their teeth filled with gold, so as to have cavities drilled in sound teeth and filled with gold. As a reason for such action, they will say that it is a sign of advanced civilization. San Francisco receives every year about one hundred Japanese dentists. Tokio has dental manufactories, making all that a dentist may need, such as lathes, instruments and teeth. There are four American dentists in Japan, but their practice has diminished considerably on account of the rise of so many Japanese dentists.—*Pacific Stomatological Gazette*.

AN UNCOMMON CASE (By Dr. Daish, *Monatsschrift für Zahnheilk*).—A young girl of thirteen years of age came for consultation at our office on June 22nd, for a swelling on the left side of inferior maxilla. The first molar and first bicuspid were sound, next was second temporary molar, and still in place; it was removed in hope of reducing the swelling, at the same time to assist the second bicuspid to erupt. The roots of the temporary tooth had undergone very little resorption; pus had escaped after extraction; poultices were prescribed for a few days. The patient was brought back a few weeks after.

Still there was suppuration, attended with repulsive odor. On August 13th, she was sent to the hospital; next day chloroform was given, and a search was made to find the second bicuspid. The swelling was about the size of a fowl's egg. An incision was made from the first molar to first bicuspid. A large quantity of pus escaped with fetid odor.

After long exploration, the probe located the tooth, but without ascertaining the position of the roots. In vain the extraction was attempted. It was decided to pack iodoform gauze into the wound and wait for a few days. The dressing was renewed daily, the wound having been washed with boracic acid.

On the fourth day, the tooth was probed again; it had come near the first bicuspid, not far from the orifice. Unfortunately, on exploring, the probe pushed it back in its former position, from which it was impossible to dislodge it. The following day, in taking out the dressing, the tooth was near the orifice. With many precautions it was taken out with an elevator.

The young girl stayed three weeks at the hospital, the treatment being used daily with permanganate of potash, boracic acid and iodoform gauze.

From information tendered by the patient, the disease had been caused by falling down stairs four years before. A few days after the accident, the second temporary molar got very sensitive; could hardly masticate; but the child never complained about it, and no consultation was asked for. When the tumor got so very painful, it was suggested to consult Dr. Daish.

On examining the extracted bicuspid, I came to this conclusion: The root of the tooth was in the process of formation; then by the fall had been so much disturbed, had brought on the death of the pulp, and mortification had set in before its entire development.—*From Progrés Dentaire.*

Abstracts.

Edited by G. S. MARTIN, D.D.S., L.D.S., Toronto Junction.

PROTECTION OF NEARLY EXPOSED PULPS.—W. J. Phillips, in *Dental Office and Laboratory* says : " Make a wafer of gutta percha and moisten one side with eucalyptol ; lay with moistened side down over point of near exposure, and cover with oxyphosphate. When this is hardened fill as desired.

ANY dentist who lowers prices for professional service advertises his own incompetency, and not only lowers the standard for the finer art and the higher grade of work in his chosen calling, but prevents dentists of a higher and more worthy class from exerting their better talent and influence for the advancement of their chosen art and science.—*Microcosm*.

THE BLOOD PRESSURE A FACTOR IN THE ERUPTION OF THE TEETH.—Mr. F. E. Constant, L.D.S., Eng., contributed a thoughtful essay at the meeting of the British Dental Association, in which he advanced the novel theory that the blood pressure exerted in the vascular tissue which lies between a developing tooth and its bony surroundings, is the active mechanical factor in the process known as the eruption of the teeth.

WHY do the teeth of the American human family decay as they do? Because they do not know how to cleanse the oral cavity. Teach your patients how to irrigate the oral cavity. Make them use elbow-grease, common sense and pure water. Make them pass the water through the interdental spaces, and gargle. Make your patient take a hand-glass and go to the window so that he can see when he has really cleaned his mouth. Ninety-seven out of every one hundred American citizens do not know how to clean their own mouths.—*Dr. J. F. Crawford, in Ohio Dental Journal*.

DR. J. FRANK ADAMS, Toronto, uses a most admirable varnish for cavities before filling. It is made by taking

Virgin rubber	grs. v.
Chloroform	fl ℥ ij.

Dissolve thoroughly by succussion. This takes about two weeks.

Gum mastich	℥ ij.
Chloroform	fl ℥ i.

This latter dissolves with ease. Mix the two and shake well.

BRUSH THE GUMS.—Many of us fail to impress upon our patients that the gums need brushing as well as the teeth. If the patient will do that properly it matters little whether he uses borolyptol or water.—*C. S. Stockton, in Items.*

A LOCAL ANÆSTHETIC.—

Chloroform	10 parts.
Ether.....	15 parts.
Menthol	1 part.

When used as a spray for one minute it produces local anæsthesia for three minutes.—*Dental Office and Laboratory.*

JOIN A DENTAL SOCIETY.—It is said of the twenty-five thousand dental practitioners in the United States that only about five thousand belong to the dental societies, which shows an alarming indifference to professional interests that is difficult to explain. That the greatest benefits are derived from society efforts, goes without saying, and this alone should be sufficient inducement to any dentist to join the good work.—*W. H. Chilson, in Dental Review.*

SHOCK.—“It is my opinion,” rays Dr. Garrett Newkirk, in the *Dental Review*, “that extra susceptible children, or young people, should not be kept in the chair, as a rule, more than half an hour at a time; adults (usually they are women) not more than an hour—as much less as may be. We prepare too many cavities and fill them at one sitting. We do not use temporary stoppings of gutta percha as frequently as we should, waiting for recuperation from shock. We think possibly not too much of the teeth, but too little of the individual behind the teeth.”

CATAPHORESIS.—Dr. Custer says, in the *Dental Cosmos*, of cataphoresis: In regard to cataphoresis, a few things are desirable. The current must be constant. It must not change or there will be a shock. Then it must be applied gradually at first, and then raised as seems to be required. The Edison or a galvanic current are the best. The anodes must be held perfectly quiet. The sensibilities of the patient are so delicate that the pulse of the operator can often be felt. Then the enamel is not a good conductor, but acts like glass or porcelain. The denture must be laid bare to the last tubule, for it is through the moisture of the tubuli the current flows. Every tubule must be exposed or it will remain sensitive. The cocaine must reach the pulp through the tubuli or their sensitiveness will not be allayed. Then all metals must be kept isolated. The clamp must be kept away or it will carry off and waste the current.

AMALGAM.—Dr. C. Edmond Kells says, in the *Ohio Dental Journal*, life is too short to spend on such useless work as filling cavities in back teeth with gold. It is far more satisfactory to spend a fraction of the time, a fraction of your strength, give but a fraction of discomfort to your patient, and accomplish the same result, namely, the saving of the tooth by using amalgam. If you take the same pains in the use of amalgam as in the use of gold, you will get as good results.

CONCERNING VULCANITE.—Dr. Cyrus A. Allen, in an article in the *Dental Cosmos*, claims that vulcanite is destroyed, to a certain extent, if the temperature of the vulcanizer be raised above 300° F. If the air enclosed in the pot be not expelled, at least 15° should be allowed, and at least another 15° should be allowed for loss of registering power of the thermometer due to radiation of heat, the conduction of currents of air, temperature of room, etc., so that with the usual way of vulcanizing, instead of 320°, we have at least 350°. The consequences he summarizes as follows: (1) Destruction increasing proportionately with temperature, elevation and loss of elasticity. (2) Extreme contraction, resulting in the plate having no membranous contact across the posterior part. (3) Broken or cracked sections, or "slivered" at joints. (4) Sponginess of vulcanite at thickest portions, which may be manifest over a considerable surface, or may appear only at certain points in size and shape, like a split pea.

MASTICATING.—If we say we know how to masticate properly, we sin against light and knowledge. We had better say we do not know. I have often asked dentists how much they urge their patients to masticate properly. Some of them say they never speak to their patients about it, and very rarely have I heard one say that he gave any special information or urged his patients to masticate thoroughly. It is not only the mastication, but the thorough insalivation that is required. Those persons who masticate their food most thoroughly have the best teeth. They have the least dyspepsia and the best nourished tissues in the body all through, and are better able to withstand all attacks of disease than those who do not masticate thoroughly. I know from observation that the majority do not masticate their food in anything like an adequate degree. I have noticed in this village a number of dentists, and I have observed that they take their meals in a few moments' time, the food not being thoroughly masticated nor thoroughly insalivated. I believe if the dentist can impress on his patient the importance and the necessity of thorough mastication then he has done one of the greatest services for his patient that is within his power. It is better than treating the disease and conditions which we so frequently meet. It is

hygiene of the mouth and the teeth, and it is for the benefit of the entire organization of the patient as well as of the teeth. The mother, the father, the nurse, and anybody in care of a child, should notice it as early as three years of age, and teach it to masticate thoroughly and properly. The habit will stay with it through life and prevent many of the ills and distresses that assail us.—*Dr. Taft, in International Dental.*

THE *Dental Review* calls attention to the advantages of lubrication of discs, and polishing strips for finishing fillings. Many are of the opinion that the use of vaseline will interfere with the cutting qualities, but such is not the case. The unpleasant grating and heating complained of by the patient are prevented and the danger of discs tearing off the rubber dam is done away with. Discs are also made flexible, and thus are made more serviceable in shaping contour fillings.

THE HERBST NEEDLE.—The following is a description of filling cervical cavities with gold by the help of the Herbst needle, which we copy from the *Dental Record*, London: "The rubber dam is adjusted in the usual manner, in the present case exposing eight of the anterior teeth; the dam secured by clamps on the first bicuspid on either side. The rubber is carried up between the teeth by a thread; the tooth to be stopped is thus in view, and it only requires the Herbst needle to be applied—so that the gum and dam may be held out of the way—but our work on the cervical portion of tooth may be proceeded with. The needle in use is one made from a broken bur, the latter being ground to a fine point on the side of a carborundum wheel by gentle pressure and rotation; the latch end is broken off and any roughness at fracture smoothed away. The point is inserted beneath the free edge of the dam and passed upwards until the needle point has passed by the seat of caries, and the sound cement is felt to have been reached. Until now, the direction of the point has been upwards and backwards; when the true position is believed to be attained, the direction is changed so that the needle stands out at right angles to the cement, the position to be retained throughout the operation. Securing the needle is very simple; one of the fingers of the left hand is placed on the projected rounded end of the needle, while the forefinger and thumb of the right grasp the middle so as to release the left hand from its hold on the needle; the left hand thus being free, it is used to stretch the dam forward and draw it over the end of needle; the rubber, by its contraction towards the teeth, pulls the needle into firm contact with the cement." If any of our readers will follow the above described method and attain any sort of success, we will be glad to be apprised of it.

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

[In this place we propose making a new departure in dental journalism. It is intended to appeal specially to the editors of medical journals, and medical men generally, to whom even a hint is often better than a harangue. Our readers could, if they would, supply us with appropriate material, either original or selected. Necessarily the latter must be abridged as much as possible, giving the source from which the selection was made. We are under deep obligations to Dr. Curtis for the promise of original contributions, the first one of which appears in this issue.—ED.]

MR. EDGAR BROWNE contends that in lamellar cataract without history of fits the teeth are usually good.—(*Ophth. Review*, page 354, 1886.)

FUNCTION OF THE TONSILS.—Dr. Fox thinks their function is connected with the re-absorption of the surplus saliva, and it is suggested that these glands absorb the poison of scarlet fever, diphtheria, etc., from the saliva. The poison of a common tonsillitis has little more than a local effect; that of a scarlatinal tonsillitis is able to reproduce itself in the system indefinitely without deterioration.

RELIEF OF TOOTHACHE.—A satisfactory remedy for the relief of this unfortunately common ailment is always acceptable. Dr. Gills, of Briancon, has reported to the Société de Therapeutique de Paris (*Therapeutical Gazette*) that he has already relieved toothache due to dental caries by means of hot antiseptic mouth-wash consisting simply of a hot, aromatized 1 to 10,000 solution of bichloride.—(*Medical Standard*.)

DEFECTIVE TEETH AND CATARACT.—Several cases reported with double zonular cataracts, and teeth presenting marks due to arrest of development. Attention may be drawn to the close analogy between the development of the crystalline lens and that of a tooth. Any cause interfering with the growth of the lens, or of a tooth, might produce the peculiar zonular cataract in the one, and the defects in the enamel of the other, which had been variously assigned to the action of convulsions, rickets, or mercury.—(*Record*, London, Eng.)

HÆMORRHAGE AFTER TOOTH EXTRACTION.—Pass a double silk thread through both sides of the torn gum, either with an ordinary curved needle, or a handled needle, and tie firmly over the alveolar border. Remove in forty-eight hours.—(*Cosmas.*)

AN ANTISEPTIC WASH FOR THE MOUTH.—The *Presse Medicale* for July 18 contains the following formula :

R. Thymol	gr. iv.
Benzoic acid	gr. xlv.
Tincture of eucalyptus.....	gr. ccxxv.
Essence of peppermint.....	gr. lx.
Chloroform	gr. xv.
Alcohol	$\frac{3}{4}$ ij.

M. Twenty drops of this solution in a glass of water may be used at a time.

CHANGES IN THE TEETH DUE TO ABSENCE OF ENAMEL FROM THE PERMANENT TEETH ("Mercurial," "stomatitic," "strumous" and "rickety teeth").—The change occurs in lines running horizontally across the whole set of permanent incisors and canines. When slight it affects only the part near the edge, the enamel beginning as a sudden terrace or step, a little distance from the edge ; in bad cases several such "terraces" are present and the whole tooth is rough, pitted and discolored. The first permanent molars show a corresponding change on the grinding surfaces. It is this imperfection that is found present in nearly all cases of lamellar cataract, though the dental condition is common enough in persons without that or any other form of cataract.—("Diseases of the Eye," Nettleship.)

METHOD OF PREVENTING DISAGREEABLE AFTER-EFFECTS OF ETHER AND CHLOROFORM NARCOSIS.—Fraenkel (*Zeitschrift für praktische Aerzte* ; ref. in *Bull. Gen. de Therap.*, Sept. 26 1896, page 235) makes use of the following mixture as a hypodermic a quarter of an hour before the administration of the anæsthetic to prevent the disagreeable after-effects of ether or chloroform :

Morph. hydrochlor	0.15 gme.
Atroph. sulph	0.015 gme.
Chloral hydrate.....	0.25 gme.
Distilled water	15 gme.

He gives about $1\frac{1}{4}$ c.c. Under these previous injections patients are very sensible to the action of chloroform, generally the hypnotic effect coming on after using 25 to 30 gme. of the anæsthetic. In cases of heart lesion this mixture was not used. People who ordinarily bore morphine badly did not do so if given in this form.—(*American Medical and Surgical Bulletin.*)

Selections.

THE FOUR DEGREES OF WEAR OF BROCA.

By CHARLES H. WARD, Osteologist, Rochester, N.Y.

While anthropology as a science claims France as her birth-place, so to the subtle skill of French savants do we owe many of the modern methods of exact registration.

Notably successful in lifting craniometry to the dignity of a science, was the late Paul Broca,—a man of wonderful patience, of indefatigable industry, and, withal, a bold and successful generalizer.



FIG. 1.

Let us examine one of his minor inventions. In the comparison of skulls of various races of man, no point of interest must be allowed to escape unrecorded. To this end a fixed standard is imperative. Instead, therefore, of describing the teeth of a skull as "slightly worn," "much worn," etc., he established the following scale of comparison, known as "the degrees of wear, of Broca." To quote from his disciple, Topinard: "In the first the enamel alone is worn" (see fig. 1); "in the second, the tubercles of the crown have disappeared and the ivory is exposed" (fig. 2); "in the third, some portion of the height of the tooth is reduced" (fig.



FIG. 2.

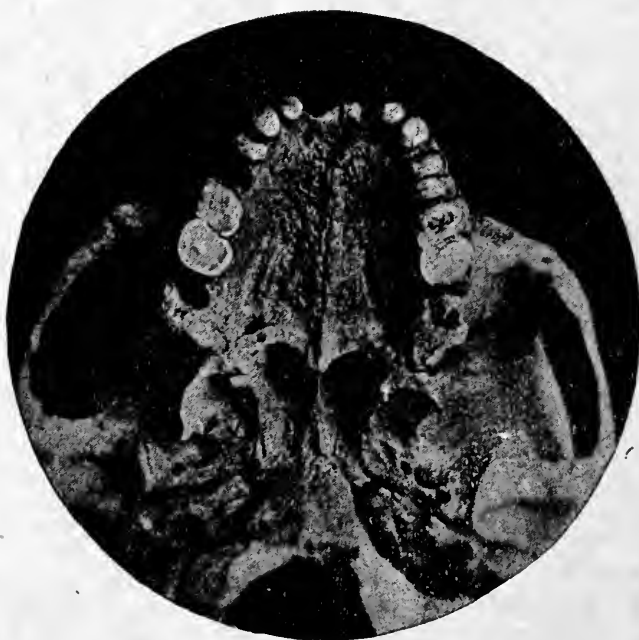


FIG. 3.

3); in the fourth, the wear has extended to the neck" (fig. 4).
"The last is seen in old age, but is more often the result of particular habits, as that of chewing the betel-nut, among the Malays, or working with the teeth on skins, among the Esquimaux."

In my series from which the above illustrations were taken, it is interesting to note that not one skull of a civilized race could be found from among a hundred or more, showing this fourth degree of wear. While the first, second and third degrees of wear are exhibited on modern European teeth, the fourth is a skull taken from an ancient grave on San Maguil Island, Coast of California.



FIG. 4.

That the degree of wear is not an index of age, but rather of diet, is true among aboriginal and semi-civilized types. In civilized communities, where physical (as well as mental) habits conform to certain ethical standards, the third and fourth degrees of wear, where found, would indicate great age.—*Odontographic Journal*.

[We have to thank the publishers of the *Odontographic* for the use of the illustrations. In the early days of the North-West, when pemmican was a chief diet of the native tribes, as well as of the whites, the above fourth degree of wear was common, and may be found in skulls to-day. We have seen cases where, without the least appearance of caries, the entire dentures of both maxillaries were worn away fully one-half, even to the obliteration of the pulp chamber. In our student days, we remember the late Sir George Simpson, then Governor of Hudson's Bay, describing this condition to Dr. Brewster. His own natural teeth were worn to the gums. Dr. Brewster made him a set of single-gum teeth, strengthened in every way possible, and the wear and tear imposed upon these was remarkable.—ED. D. D. J.]

ON THE TEETH OF SCHOOL CHILDREN.*

By PETER UNGHVARI, of Szegedin.

Latterly the hygiene of the school has become the object of special attention to the authorities concerned in Hungary and in many other states. In order, however, to obtain an exact knowledge as to the influence of the school upon the development of the body, and also its favorable or noxious influence upon the condition of health of the children, a general hygienic supervision is scarcely sufficient; the examination must be placed in the hands of specialists. In Sweden particularly far-reaching arrangements have been made in this direction.

Encouraged by the example there, and in some districts of England, I have, of my own accord, carefully examined the teeth of one thousand school children, and do not consider it amiss to publish the facts gleaned from this investigation.

These one thousand children of both sexes, ranging in age from six to twelve years, were examined in the school year 1890-91, in the school of this city, and in the Jewish normal school. The examination took place in the morning between the hours of 8 and 9 o'clock, in the presence of the teachers engaged there.

The examination was attended with great difficulties, for in addition to those arising from extraneous causes, I was obliged, in order to work systematically and to fix the data completely, to prepare for myself two tables, whose separate headings I had to keep constantly before my eyes.

In the collection of the facts the procedure was as follows: For every child to be examined I prepared a page to receive the record, and on the two sides of the page were diagrams of the two sets of teeth. On one side were noted, besides the name and age of the child, the carious milk teeth, and the eruption of the permanent teeth (*Zahnwechsel*), and on the other side the carious permanent teeth. In consequence of this scheme from ten to fifteen children at the most could be examined in one hour.

The results of my investigations, as may be seen from the two tables, are as under:

1. The milk molar teeth in much the greatest number were destroyed by caries. The cause of this is partly due to defective cleansing of the mouth and teeth, and partly to the fact that those milk teeth which first decayed were neither treated at the right time nor extracted. Owing to this neglect not only the health of

* Translated from the *Oesterreichisch-Ungarische Vierteljahrsschrift für Zahnheilkunde*.

the milk teeth, but also that of the permanent molars first appearing, is jeopardized.

2. The sex exercises no influence upon the proportion of good to bad teeth, for in both sexes it is the same. In each child is found 3.5 carious milk molars.

3. In the first permanent molars, the so-called sixth year molars, the percentage of carious teeth is also very great; on an average there are two carious molars per child.

The deleterious influence of these defective molar teeth upon the digestion, owing to insufficient mastication of the food, and also upon the remaining teeth, is known well enough. It is therefore advisable to remove such defective teeth as quickly as possible in case they can no longer be preserved, for the molar teeth following, owing to the more roomy space thus made for them, then develop better, and can more easily be kept clean.

The thorough examination of such a large number of children has convinced me that parents give little care to the teeth and mouths of their offspring, indeed in many cases they do not seem to have any idea of the simplest necessities. Even parents belonging to the well-to-do classes underestimate the influence of the care of the mouth and teeth upon the organism, and consider one daily, often not careful, cleansing of the mouth in the morning sufficient, and as regards the milk-teeth, are of opinion that they are scarcely of any importance to the child. It would therefore seem to be indicated to request parents to insist upon their children cleaning their mouths and teeth after every meal, and especially in the evening, with toothbrush and tooth powder, and to present the children to the dentist at regular periods.

Proceedings of Dental Societies.

TORONTO DENTAL SOCIETY.

An interesting and profitable meeting of the Toronto Dental Society was held at the office of Dr. A. J. McDonagh, Spadina Avenue. Instead of an essay, Dr. Harold Clark gave a talk on "Devices and Expedients," which proved of value to all present. From among the many valuable hints given by Dr. Clark, we glean the following:

Temporary stopping for retaining medicaments.—

Fluid—Saturated solution zinc sulph.

Powder—Zinc oxide 10 parts.

Powdered acacia..... 1 part.

Varnish for cavities—

Gum benzoin	} Equal
Canada balsam	
Dissolved in chloroform pretty thin.	

This varnish is useful to overcome shock from thermal change in cavities, may be used under oxychloride to avoid pain. Will also assist in retaining first blocks of gold in inserting a filling, or will retain gutta percha.

The best solvent for arsenic is glycerine.

It is a good idea to take impressions of typical cases of natural teeth to make models, and in setting up artificial teeth work to these models.

To avoid separated teeth coming together before the cavities are filled, attach to your ligatures a loop of piano wire at such tension that the teeth are held apart until fillings are finished.

The Toronto Dental Society, at the regular November meeting, elected for the next twelve months the following officers: Honorary President, Dr. G. S. Martin; President, Dr. H. E. Eaton; Treasurer, Dr. A. J. Husband; Secretary, Dr. G. Adams Swann. Committee on Membership and Ethics: Drs. Harold Clark, F. D. Price, J. J. Loftus. Programme Committee: Drs. W. E. Willmott, A. J. McDonagh, W. C. Trotter.

Reviews.

Illinois State Dental Society Transactions. Thirty-second annual meeting held at Springfield, Ill., May, 1895. Publication Committee, Drs. LOUIS OTTOFY, A. W. HARLAN, E. NOYES. *The Dental Review.* H. D. Justi & Son, 1896.

The Society is getting old, but its proceedings are ever new. Even their practical papers have a rich flavor of the prairie.

A Chord From a Violin. By WINIFRED AGNES HALDANE, Chicago: Laird & Lee, Publishers.

A charming brochure, a well-told story, by a young Canadian-born lady only seventeen years old, the daughter of Mr. and Mrs. S. P. Douthart, Chicago. It has been remarked as a curious coincidence—that the tale reminds one of the famous story, “The First Violin,” which was written by Jessie Fothergill, when she, too, was but seventeen years old. As the work of so young a lady, it shows promise of future success.

The Bur. Official organ of the Alumni Association, Chicago College of Dental Surgery. Published quarterly. Editor, C. N. JOHNSON, L.D.S., D.D.S. Yearly subscription, 50 cents.

We would not be surprised if this little *Bur* became a regular "revelation" bur, and should cut its way into bigger and broader space. Dr. Johnson is just the operator, both with pen and bur, to make it possible.

Appleton's Popular Science Monthly. Edited by WM. JAY YOUNG. New York: D. Appleton & Co. Single number, 50 cents. Yearly subscription, \$5.00.

It would require a rare library to fill the place of this special favorite. Not only does it attract the best writers on a large variety of social and scientific questions, but it is freshened each month to modern progress in a way that even text-books cannot possibly equal. In the December number, such contributors as Herbert Spencer, Hon. D. A. Wells, Andrew D. White, etc., would be enough to give a feast of reason to the reader. The entire make-up of each issue is worth the year's subscription. There is no rival to this periodical, and those who do not read it regularly do not know what they miss.

Dental Chemistry and Metallurgy. Fourth edition. Revised enlarged, and with many illustrations. By CLIFFORD MITCHELL, A.M., M.D. Chicago: The W. T. Keenan Co., 96 Washington Street. Pp. 586.

We have a suspicion generally of text-books which enlarge with each edition. Some of our best works are marred by tedious amplification. Judicious weeding is as necessary as wise planting. These remarks, however, do not apply to the fourth edition of Dr. Mitchell's invaluable work, a text-book without which no dental student can master dental chemistry. To the average medical and dental tyro, chemistry is the *bête noir* of the primary studies. The author has avoided massing together the common teachings of text-books in chemistry, at the sacrifice of that which is more specially demanded by the dental student, and has given us a work which has no rival. Besides the chapter on physics, chemical philosophy, inorganic and organic chemistry, very valuable chapters are devoted to the teeth and the saliva, with laboratory courses embracing experimental illustrations. The work has been adopted as a text-book in the dental colleges in Ontario and Quebec Provinces. It is a book that every student should own, not borrow. It should be introduced into medical schools.

Dominion Dental Journal

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VOL. IX.

JANUARY, 1897.

NO. I.

WHY WE NEED A CANADIAN JOURNAL.

The Publishers and Editor of this JOURNAL have made mutual arrangements which, it is hoped, will be in the interest of its patrons, subscribers and advertisers. They intend, with the co-operation of the editorial staff, to do their best to make it indispensable to the Canadian profession. Of course it must look for much assistance from contributors. With this number it is permanently enlarged.

But do we need a dental journal in Canada? Here and there a few of our confreres would be satisfied with those of our cousins over the border. It must be evident, however, that no foreign journal could do the work we need, any more than a city newspaper would suffice for the local interests of outside towns and villages. It is short-sighted policy to think otherwise. This journal is the only one which can devote so much space to home news. It is quite right to take others, but a Canadian journal and Canadian interests in our profession are inseparable. No other can take its place. Canada is wide awake from Halifax to Vancouver. Every commercial and industrial interest has its organ to speak specially for Canadian interests. The day is past when Canadian schools study the history of every other country under the sun, and not that of Canada. Dentistry must keep pace with this sentiment. Dentists in this Dominion would think it unfair if Canadians made

it their practice to go over the border for their dentistry. Does it not occur to them, that it would be inconsistent if they were to depend in the same way for their professional literature? We are sure our generous brethren in the United States, who have so often given us proof of their professional and personal good-will, will hold the same opinion. The large additions to our ranks in every Province increase our responsibilities. Apart from the matter of fair play, it will pay every dentist in Canada to own this journal.

UNSELFISH WORK.

It is a hopeless task to argue with people who have no faith in human unselfishness. Sometimes, in taking a broad view of the political and professional labors of the leaders, the teachers and the journalists of the United States, as well as of Canada, we are tempted to believe that very few of them, in contrast with gentlemen who occupy the same relations to the profession in Great Britain, enjoy the gratitude of their contemporaries. It has almost become one of our articles of faith, that the climate—nothing like putting it down to something which cannot offend any one—is not favorable to coeval thankfulness, and that even a fair appreciation of zealous duty must be left to a later generation. Indeed, it would be no surprise if the critics of the workers were to quote this creed as a proof of official vanity.

An editor of a journal especially, is so placed that he becomes the receptacle of all sorts of criticism, and frequently of abuse. He is occasionally not only a sort of father-confessor, but an arbiter, an adviser, a sentinel, with some leading principles to guide him, from which he cannot consistently swerve. If there is one principle more than another which the editor of this journal desired from the first to stamp into the practice of Canadian dentistry, it is this—that however desirable it is that practical and scientific development should get the fullest encouragement, it could not in itself entitle dentistry to be dignified as a liberal and respected profession, unless we were animated by a moral and ethical custom.

We have not had any unpleasant controversies over scientific questions, even when disagreement of opinion was very wide. But history has repeated itself in our difficulties with two classes in the profession. From the beginning of our legislative efforts, we have been persistently attacked by quacks and those who use quack methods. Of course they hate us. And that is some compensation. Men who are honest and ethical, as most of our dentists are should like to be detested by detestable people. We are rapidly exterminating open quackery in Canada. But it is a slower process

with others who only deserve opprobrium because they use the methods of quacks. It seems, too, that it will be still slower with a very honorable class among us, among whom are some of our very best men, hiding their lights under bushels—a class who do not believe in bothering themselves about the politics of the profession; who do not like controversy, and who, in fact, would rather pay what they consider an unjust tax than trouble themselves to resist it. It is an enviable condition, in one sense, but it is unfair. Why should others have to do the very thinking, as well as the work for them, and their protection? What more claim has the profession upon those who enter the breach of every difficulty and bear the brunt of battle, than upon those who sit idle? If there are men willing to give the time and study and money of their own which every worker has to give, that even the idlers may derive equal advantage, have they not, at least, a claim to encouragement? Do they get it as a rule? Official positions to busy men are not worth a straw. There is no gift in the franchise of the profession in any Province of Canada which will compensate a man financially for the sacrifices it entails. The profession has no right to demand that those who occupy official positions will spare them even the trouble of thinking of their own interests. And those who are so narrow-minded as to accuse such officials, without the slightest reason for suspicion, of thinking and working in their official positions for themselves, would likely be fierce in their resentment if the tables were turned, and they were themselves in office accused of the same peccadillo.

PATRONIZE OUR ADVERTISERS.

A traveller of a certain dental depot in Canada has evidently received his orders to do as much mischief as possible to this JOURNAL. No dental dealer in the Dominion has been given, or will be given, any preference whatever for which he has not paid. We cannot give the most conspicuous pages to everybody, but every page of our advertising is worth examination.

Our advertisers enable us to give our readers a very much larger and better journal than we could otherwise give. The small subscription price would not pay the cost of production, and our greatly increased list of subscribers get a direct benefit through the patronage we get from our advertisers. Every dentist in the Dominion, has a personal interest in dealing as exclusively as possible with advertisers who contribute to maintain the only Canadian journal we possess. We will feel under obligations to other friends, who may send us proofs of damage being done to this JOURNAL by travellers whose firms do not choose to advertise.

COLLECT AND KEEP THE JOURNALS.

Very few in Canada seem to realize the money value of preserving their journals and having them bound. It is perhaps a curious fact, that the marketable value of old dental journals is more than double, and in some cases quadruple, that of medical periodicals. We paid \$8.00 a volume for the first twenty volumes of the first dental journal published—the *American Journal of Dental Science*, which we possess complete to date. We believe it is the only complete set in Canada. For over twenty-eight years we have been gathering from all possible sources, odd and missing numbers to complete other periodicals, and to-day the value of the journal collection alone is about \$1,500.00, not counting duplicates. It is on record that its weight in silver coin was paid for the first twelve numbers of the *Canada Journal of Dental Science*. We would not give the early volumes of the *American Journal of Dental Science* for their weight in gold. Collect and keep your journals, and bind them. Get the earlier volumes—if you can. The young men of to-day are to become the stewards and leaders of the profession. They should know its history.

Post-Card Dots.

1. Did Prof. Wedl publish an Atlas as a supplement to his work on "Pathology of the Teeth," or is it incorporated in any edition of the latter?

In 1869, Verlag Von Arthur Felix, of Leipzig, published a very fine Atlas, arranged and explained by Profs. Heider and Wedl. The German text was preserved, but it was translated into English. There are sixteen plates, embracing one hundred and forty-five figures.

2. Will you suggest to me a special work wherein I can learn of the origin and development of the teeth and jaws?

Drs. Legros and Magitot published a work in France, "The Origin and Formation of the Dental Follicle," which was translated into English by the late Dr. M. S. Dean, and published by Garrsen, McClung & Co., Chicago, 1880. The translation included all the illustrations of the French work, with a number of additional illustrations.

3. How many dentists are there in the United States?

In 1800 there were 100. To-day about 27,000. The largest number are in New York State; then Pennsylvania, Illinois, Ohio, Massachusetts; the fewest in Alaska.

4. Who was the dentist of Geo. Washington?

Dr. John Greenwood, born in Boston; died in New York in 1816.

5. When was gold first used as a filling for teeth?

Chapin Harris said that it was about the year 1800 its use became common. Dr. Eleazar Parmly saw gold first inserted in 1815 by Dr. Waite, of London, Eng.

6. What became of the artificial sets of teeth worn by George Washington?

They are in the museum of the Baltimore College of Dentistry. The lower plate is carved out of one piece of ivory; the teeth are of ivory, fastened on with rivets. The upper plate shows a very rude repair by two thin strips of iron rivetted on the plate.

7. Who introduced arsenic as a devitalizer of the pulp?

Dr. J. R. Spooner, of Montreal. It was announced to the profession in 1836 by his brother Shear Jashub Spooner, in his little work, "Guide to Sound Teeth."

ROYAL COLLEGE OF DENTAL SURGEONS, SESSION 1896-97.

FRESHMAN CLASS.

E. C. Abbott, F. Anderson, R. C. Bain, C. E. Bachly, W. H. Bowles, M. Bowles, L. A. Barrett, F. A. Bellachey, A. J. Broughton, P. P. Bellachey, J. V. Budge, C. B. Bell, O. I. Cunningham, A. G. Campbell, R. H. Cowan, T. A. Currie, W. N. Cuthbert, H. Clark, C. H. R. Clark, M. B. Dulmadge, J. C. Devitt, E. M. Doyle, Chas. Ellis, J. C. Fitzgerald, Geo. Frizzell, F. C. Frank, Miss Fleming, L. L. Follick, H. Fox, G. W. Grieve, E. L. Gausby, I. B. Gray, W. P. Harvie, E. C. Hoskin, G. E. Holmes, W. T. Hackett, G. Howard, E. Henderson, R. Jarvis, A. E. Joselin, S. M. Kennedy, R. Lederman, C. C. Lumley, S. Lockridge, W. J. Leary, W. J. Laker, J. L. McLean, J. J. McMillan, W. A. McLaren, M. McGahey, A. W. McGregor, A. Milburn, R. J. Morton, W. W. Mills, N. Millar, C. P. Moore, J. M. Mitchell, J. F. O'Flynn, G. L. Palmer, J. M. Palmer, R. M. Peacock, T. F. Perkin, R. J. D. Quay, R. R.

Ross, D. D. Ross, C. M. Reeves, A. C. Russell, Alfred Robertson, E. J. Sanderson, J. K. Strachan, W. Seecombe, R. A. Sykes, C. A. Snell, W. J. Schmidt, C. G. M. Scott, Bruce Saulter, M. Sipes, A. Sommerville, W. G. Thompson, W. T. Willard, J. C. Wray, Wm. Woods, F. R. Watson, E. I. Zinkan.

JUNIOR CLASS.

John W. Armstrong, G. A. Beattie, H. J. M. Bannerman, Claude Brown, F. E. Bennett, A. A. Babcock, Fred. Brethour, J. W. Barker, D. H. Beaton, R. N. Berry, A. C. Burnet, J. A. Bell, W. T. Bell, Edward Barber, Chas. A. Cooke, T. F. Campbell, Joseph Coghlan, J. M. Church, A. C. Caldwell, H. O. Crane, J. A. Charbonneau, A. R. Donaldson, R. F. Denike, A. H. Day, Frank Edmonds, R. R. Elliott, Simon Frawley, Frank Glasgow, George Gow, J. B. Gerry, Gordon Grant, Geo. Humpidge, John Hutchison, J. W. Hagey, A. E. Hunt, J. A. Hilliard, G. E. Hill, Norman Hunter, Harry Hoare, R. R. Harvie, Harry Jackson, J. A. Kirkland, F. B. Kenward, H. M. Kalbfleisch, C. A. Kennedy, W. H. Liddle, W. W. Lemmon, H. J. McNaughton, F. D. McGratton, D. McK. Mitchell, S. S. Martin, G. T. Marrs, A. T. Morrow, T. F. O'Brien, T. R. Patterson, O. G. A. Plaxton, S. M. Snedden, John Scott, John Shields, F. A. Sellery, Andrew Scott, W. G. L. Spaulding, A. A. Smith, U. B. Shantz, T. W. Stoddart, J. E. Tagsart, Freeman Waugh, P. P. Winn, L. C. Wadsworth, A. W. Winnett, W. H. Woodrow, O. A. Winter.

SENIOR CLASS.

Chas. E. Bean, Ford Butler, John D. Booth, John A. Bothwell, Frank Buchanan, Wash. Buchanan, E. L. Brereton, F. H. A. Baxter, J. J. Campbell, A. E. Cummings, L. Cashman, H. C. Crease, T. E. Dean, S. E. Foster, M. F. Forsyth, F. G. Gilmore, Wm. H. Graham, C. K. Henderson, Jas. Harold, G. G. Hume, W. D. Knight, G. T. Kennedy, A. R. Kinsman, G. H. Kennedy, R. E. Loucks, A. E. Little, R. C. McClure, W. McGill, A. H. McLean, R. J. McGahey, A. L. McLachlan, G. C. Mathison, W. A. Maclean, W. A. B. Macdonald, F. H. Miller, J. R. Paton, J. P. Pulkinghorn, G. S. Richardson, H. S. Reynolds, G. A. Roberts, J. C. Sweet, J. L. Sutton, N. J. Sills, H. E. Silk, John Steele, Wm. S. Westlund.

"I never read anything in the journals excepting the advertisements," said one of the few non-subscribers. Well, that alone is an education worth more than the subscription. But such people ought not to object if we throw in forty pages of reading matter for them, just to show our generosity.

Dominion Dental Journal

VOL. IX.

TORONTO, FEBRUARY, 1897.

No. 2.

Original Communications

PORCELAIN WORK.*

By DR. F. J. ROSS.

So great has been the demand for invisible dentistry in these modern times when our patients give so much attention to their dental organs, that a new interest in porcelain work has been forced upon the profession.

How numerous are the fair sex who are beautiful to gaze upon until they open their mouths and dazzle you by a dozen enormous gold fillings, or worse than that, stagger you with a full set of artificial teeth, arranged in a beautiful row.

Porcelain work has come to the rescue of such unfortunate people, and now broken down teeth can be restored to their former appearance to such a degree that imperfections can scarcely be detected, even by the professional eye.

Porcelain work, skilfully done, has no equal for durability and artistic effect, but when unskilfully done there is perhaps no class of work that is apparently more discreditable to the operator. Like every other branch of dentistry, it has its imperfections, and its uses are limited, but it has great possibilities and a brilliant future is in store for it.

While the number of dentists practising porcelain work is steadily on the increase, there are yet very many who are opposed to it, some of whom have experimented with it in an unskilful and careless manner, and had the inevitable disappointing results; and some, having seen the unskilful work of others, have said harsh things about it, emphatically denouncing it for all time. Yet this

* Read at eighth annual meeting of Ontario Dental Society, Toronto, 1896.

opposition to porcelain work one cannot altogether condemn, for nothing is more deleterious to the best interests of dentistry than a too sudden acceptance of new ideas and methods, and their introduction into daily practice, before they have been thoroughly tested. The abuse of amalgam and crown-bridge work on their introduction may serve as examples.

Another cause of the revival of porcelain is the present degree of perfection in the manufacture of the various bodies and furnaces for their fusion. We have now eight or ten standard high fusing bodies which by mixing produce an infinite variety of shades.

For those who prefer low fusing bodies the Downey outfit furnishes a wide range of shades.

The furnace which I have always used, and which has given entire satisfaction, is Dr. C. H. Land's "Midget" furnace, which consists of an open flame and platinum muffle. In this furnace a heat of 3,300° F. can be obtained within five minutes of the time of lighting. This furnace is very convenient for small work like inlays, crowns and small bridges.

From the beginning of porcelain work the most conspicuous drawback has been the difficulty and uncertainty in the production of heat, and that is one reason why continuous gum work, particularly, has not been more popular with the average practitioner. For this class of work Dr. Land's "revelation" furnace is a wonder. It can be operated with crude petroleum, refined oil, gasoline, or ordinary illuminating gas, and requires no forced draft. In this furnace each baking in the continuous gum process requires but ten minutes, thereby reducing from hours to minutes the time required for this heretofore long and tedious process.

The latest and best of all is the electric furnace. Perhaps the most complete one in operation at present is that invented by Dr. Levitt E. Custer, of Dayton, Ohio. It is very small, scarcely larger than an ordinary vulcanizing flask, easy to operate, and its chief point of superiority over other furnaces is that being electrically heated it gives rise to no products of combustion, thereby avoiding absolutely what is known as "gassing." Then the heat is constant and easily regulated by means of a rheostat, and the furnace is free from noise and odor, and radiates but little heat about the room.

The uses of porcelain are decidedly various, consisting of inlay work, crowns, bridges, continuous gum work, besides many forms of repairs and alterations, such as fusing pins into broken teeth or blocks, repairing gum sections, altering the contour of teeth and sections, making two or more blocks continuous, changing the shade of teeth with mineral stains, and painting gold fillings on artificial teeth and crowns.

Of the minor operations in porcelain work, the inlay is perhaps

the most difficult, indeed, the insertion of a good inlay is one of the most difficult operations in dentistry.

Success in the insertion of porcelain inlays depends not only upon the mechanical skill of the operator, but upon his judgment as to where they are indicated. They are especially indicated in labial cavities of incisors, cuspids and bicuspid, and large approximal cavities in incisors and cuspids, especially if the teeth are of inferior structure. Small approximal cavities are to be avoided, unless an unusual amount of access is obtained.

Some of the advantages of porcelain inlays are these :

1. They are inconspicuous.
2. Being set with cement, they add strength to frail teeth.
3. They are poor conductors of heat and cold.
4. They dispense with that inevitable nervous strain associated with long continued gold operations.

The method of procedure is this : (In the absence of practical demonstrations it may be difficult to follow this, but I will try to be as clear as possible.) After reasonable access to the cavity is obtained it is excavated in the usual manner with no undercuts, and walls almost parallel. The margins of the cavity must not be bevelled, but with great care made sharp or perpendicular, *i.e.*, at right angles to the floor of the cavity. The objection to bevelling the margins is that the edge of the filling will be too feathery and will lap all around, and if any after trimming is done, a gaping joint of cement will be exposed. Now with a matrix of thoroughly annealed platinum foil, gauge about 50, of sufficient size to more than cover the aperture, an exact impression of the cavity is taken by placing the foil flat over the entire cavity, holding it in position with the thumb and finger of the left hand, while with an ordinary steel burnisher it is pressed into the cavity with the right hand, great care being taken to avoid lapping the platinum at any point. Now remove this platinum impression with pliers, and with a fine sable brush half fill it with porcelain of proper shade, mixed with clean water, gently tapping the pliers to make the porcelain reach every corner of the matrix. The water which comes to the surface on tapping is then removed by placing the work on a cotton napkin. Place this on a platinum tray covered with silex at the aperture of your furnace, until it is thoroughly dried, and any foreign matter, such as blood or saliva is burnt out, then place into the furnace until it is imperfectly fused or "biscuited." After it has cooled replace the matrix into the cavity and carefully burnish down the edges again ; and just here is where carelessness is most disastrous to your filling. The platinum must be perfectly burnished to the sharp edge, without any lapping, or your filling will be very imperfect. Now porcelain is again applied, making the desired contour, and the filling is baked until glossed. If, after

this second baking there are any evidences of shrinkage of the porcelain and platinum at the edges, again place the filling in the cavity and burnish down the platinum, and after adding porcelain bake a third time. This is frequently necessary.

Now remove the matrix with a pair of fine pointed pliers, commencing at the edge and working to the middle to avoid chipping the edges. As a last step, with a diamond or rubber-and-corundum disc, cut a groove around the entire cavity portion of the filling, parallel with the edge. Now apply the rubber dam whenever possible, and with a good cement (Justi's preferable) mixed to a creamy consistency, carefully place the filling into position, and after about fifteen minutes protect the edges from moisture by a thin coat of Gilbert's varnish and melted paraffin over that.

In very large cavities on the labial surface of incisors and cuspids, the shrinkage of the porcelain with the matrix after the first baking is sometimes so great that the filling will rock when placed into the cavity for the second burnishing. In a case like this simply break the porcelain in two in the centre and it can then be pressed into position very readily.

Large tips and corners should have pins baked into them to extend (in the case of devitalized teeth) into the root canal, and in living teeth wherever your judgment allows you to drill without endangering the pulp. In the insertion of these pins I usually burnish the foil into the cavity as in ordinary cases and thrust the pin right through it into position in the retaining point drilled for it, then apply my porcelain to the matrix while the pin is in position, and after extracting the moisture carefully withdraw and bake.

The chief objection to all kinds of inlay work, *i.e.*, the belief that the cement with which it is retained will wash out and leave an empty joint, is reduced to a minimum if skilful work is done and joints are good.

The porcelain system has many advantages in the operation of crowning, and offers various means of overcoming difficult cases where "store" crowns are impracticable. Operators are few and far between who are skilful enough to fit a Logan crown to a root as perfectly as a porcelain crown can be made for the same case. Then the all-porcelain crown is exceedingly strong. The crowns that come back to us to be repaired are, in the great majority of cases, those with metallic backs which would appear on first thought to be the stronger of the two, but which are in reality very much weaker, because there is no perfect union between the metallic back and the facing, the porcelain being simply held in position by two small platinum pins. On the all-porcelain crown the backing and facing are perfectly fused together into one solid piece.

The most useful crowns made by this system are post crowns with and without bands, tube crowns and jackets. Most of you are probably familiar with the method of making post crowns, but the few brief points I give may be new to some.

The root is ground off flush with the gum mesio-distally and then made to recede beneath the gum on the labial and lingual sides, thus forming a sort of wedge. Now the root canal is reamed out and an iridio-platinum post fitted into it as far as possible, *marking* its length and allowing it to extend beyond the root about two or three lines. Cut out a matrix of platinum foil about twice as heavy as that used for inlays and a little larger than the exposed surface of the root, through its centre, force the post through to where it was previously marked, solder the two with a minimum amount of pure gold. Place the pin back into position and burnish the matrix perfectly to the root. Remove and bake around the extending pin a foundation of porcelain. Place back into position and again burnish the platinum to the edges of the root. Now select a veneer of proper shade, grind it to fit the gum and after adjusting to position with stiff body, remove the whole with pair of pliers, shape the crown as desired and then bake until glossed. Trim with sandpaper, disc where you think necessary, and cement into position with oxyphosphate or gutta percha. I usually leave the platinum on and scratch with a fine-pointed instrument for the adhesion of the cementing material. In cases where a band is desirable the root is trimmed off beneath the gum labially and left higher lingually, the same as in the Richmond banded crown, and the cap, of course, is made of pure platinum, all soldering being done with pure gold. The rest of the operation is similar to that already described.

The tube crown is easily and quickly made, and although it is perhaps not quite as strong as the one just described it has its own peculiar function. It is particularly indicated in cases where the root canal has become enlarged through caries or where the pin of a broken crown has been left in position in a root, and which you will all agree is not easy to remove. In the former case, the canal should be threaded and a gold or platinum screw dipped in thin cement turned into place, allowing it to extend about three or four lines beyond the root. While the cement is soft pack amalgam down between the screw and the enlarged root as far as possible, building up the root flush with the gum. When this has hardened you have a very strong foundation.

The first step in making the crown is to make a platinum tube to fit the projecting post by twisting platinum foil around it. Then cut out a matrix of heavier foil a trifle larger than the surface of the root, puncture it in the centre and slide it over the tube already on the post, withdraw tube and matrix and unite them with the

smallest possible quantity of pure gold. Now proceed as with a post crown. I can highly recommend this where a post of a broken crown has been left standing and the thought of taking out that post gives you that proverbial tired feeling.

In the "jackets" we have the combined qualities of nearly all our reliable crowns and I think it scores more points of excellence than any that has yet been devised. Its use is indicated in restoring teeth that are ill-developed, irregular in form, misplaced or twisted in the socket, and in cases of badly decayed teeth where pulps have receded it can be used without destroying the pulp. In bicuspid, it has all the advantages of a gold cap without its conspicuousness.

We prepare the tooth to receive the crown by grinding it to a conical shape, obliterating the cervical ridge and concaving the labial surface sufficiently to receive the porcelain facing used for the case. Fit to the cervical circumference a lap-jointed tube, gauge 30, slightly longer than the tooth and filled out mesially and distally to allow for the festoon of the gum. Grind out the lingual portion of the tube flush with the tooth with a lathe corundum wheel, to this portion fit a back of iridio-platinum plate of same gauge and solder with pure gold. Trim off the surplus of this plate and again fit to the tooth.

The next step is to grind off the labial surface, and if this is carefully done a thin film of platinum will remain which will prevent the body subsequently added from getting into the tube. Now this jacket is replaced upon the tooth and adapted to the surface of the stub by pressure with an old plugger and the cutting edge clipped off or turned up so that its length will be a little shorter than a veneer to be used. The veneer is then chosen, properly ground and placed in position on the face of the jacket, which has been covered with wet porcelain; after artistic relation with the other teeth have been noted, the jacket is seized with a pair of short tweezers and removed, great care being taken that the facing does not change position. It is then placed on the platinum tray on its side and baked, as often as is necessary, trimmed and cemented with oxyphosphate.

You will see another advantage of this in its being constructed so that in case of subsequent trouble easy access can be had to the pulp in a direct line with the root canal.

For bicuspid the tube, of course, is not ground on the lingual surface but on the occlusal surface sufficiently to allow the soldering of an articulating cusp of iridio-platinum. The labial surface is ground as in other cases, the veneer placed in position and attached to the porcelain.

Time will not permit me to speak of bridge and continuous gum work, but I may say that the porcelain bridge has the advantage over gold from the hygienic standpoint. When small it is stronger

than gold work, but in cases where several teeth are to be restored the gold is stronger and much more preferable. It is particularly indicated where there is considerable absorption of process, when the lost tissue can be restored by the use of gum enamel.

In conclusion I will mention a few precautions that should be taken by those who operate with this material.

1. Don't use too light a shade. This is a conspicuous error and shows up the operation to great disadvantage.

2. Remember that the color of the cement has considerable effect on the shade of inlays.

3. Be careful not to overheat your work, as excess of heat destroys colors.

4. Don't use borax when soldering, but remember that pure gold and platinum are the noble metals and do not oxidize.

5. Use fairly quick setting cement for inlays, and be sure and mix it thin.

6. Absolute cleanliness must be strictly observed in all operations.

Above all, good judgment must be exercised as to where inlays should be used. Do not place them in cavities difficult of access and if gold or other materials can be used to better advantage by all means lay aside your porcelain for an appropriate case.

HOW I INDEX MY JOURNAL.

By A STUDENT, Toronto.

When my JOURNAL arrives, I take a full page of blank paper the same size, and make an alphabetical subject-index of each issue, precisely upon the plan used by the *Cosmos* and other journals. Indeed, I prefer to do it for myself, as it impresses the matter more firmly on my mind, and gives one practice in selection and discrimination. I inherited from my late father the complete issues of the *Canada Journal of Dental Science* and the DOMINION DENTAL JOURNAL, and I value them, as the history of the Canadian profession, as much as I value Dr. Kingsford's works, as the history of our Dominion. It is very interesting and instructive to take them down from their shelves, and go over the story of the organizations in the different Provinces, which are only recorded in our Canadian journal, and reflect upon the individual zeal of the laborers in our dental vineyards. However worthy other work may be, and all other work is worthy, that alone in black and white in our journals stands recorded. We cannot possess the lectures, and the actual work done for us as students by our painstaking

teachers, but in after years it is a grand thing to have something of our own, wherein some record of the work is placed within our reach. The field of the profession has its limits, but that of the JOURNAL has comparatively none. It is an educator and an inspiration in every office in every Province, and I urge my fellow-students to possess themselves of it.

SEVERE CASE OF HÆMORRHAGE.

By T. L. HALLETT, M.D.S., St. John's, Newfoundland.

Monday, September 21st, I extracted several teeth for a young man aged twenty; and having had severe hæmorrhage after previous extraction, I proceeded to at once pack the alveoli with cotton and tannin; the bleeding stopped at once and remained all right until the following Saturday morning, when one of the right superior bicuspid started bleeding; packed with cotton in tannin and antipyrin solution. In the evening bleeding occurred from the alveolus of the opposite tooth, and in spite of all I could do, with the help of the family physician, who administered the different hæmostatics and tonics, it bled excessively, with slight intermissions, for more than a fortnight. It left him very weak for some time, but otherwise no ill effects. A brother dentist had a similar time with the patient's brother last year.

SOME PECULIARITIES OF THE JAWS.

By L. P. HASKELL, D.D.S., Chicago, Ill.

There is in 95 per cent. of mouths more depression in the region of the left bicuspid than the right. The process is shorter on the left side than on the right, so that if the anterior teeth are arranged close to the gum they will be too short on the left when placed in the mouth.

In a majority of mouths the teeth on the left side of the lower jaw in the region of the cuspids are higher and more prominent than on the right. The left side of the lower jaw recedes farther from the median line than on the right.

Strange to say, I have found but few dentists who have observed these peculiarities. Who can tell the cause? I have a theory and so has Dr. Talbot, but would like the opinions of others.

Correspondence.

OUR CHICAGO LETTER.—No. 2.

By C. N. JOHNSON, L.D.S., D.D.S., Chicago.

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—In considering the dental societies of Chicago the one which was named after the city must always assume prominence. The Chicago Dental Society is the oldest in the western metropolis, It passed the quarter century mark several years ago, and is strong in old associations and good work. It holds monthly meetings, except in July, August and September, and its proceedings are published regularly in the *Dental Review*. I recall vividly with what interest I used to read the discussions of this Society back in the early eighties before I came to Chicago, when they were published (I believe) in the *Ohio Journal of Dental Science*. They always seemed to me to have a freshness about them that distinguished them from the proceedings of any other society, and I have gone on to this day growing in admiration for the work done by this old pioneer body.

Since I have dropped so unsuspectedly into the use of the first personal pronoun in these letters, may I be pardoned a further breach by digressing sufficiently to say that the Chicago Dental Society holds an additional claim on my affections in being the first dental society I ever joined. It has honored me with the highest offices in its gift ; it contains many of my closest personal friends, and the sum total of its benefits to me, let me hasten to add, can never be measured by anything that I, working never so faithfully for its best interests through the remainder of my professional life, can ever hope to accomplish for its advantage. Its traditions and membership are representative of the best elements in Chicago dentistry, and its influence for good has not been confined to its immediate environment, neither can it be computed by its years of existence.

The Odontographic Society was organized in 1887 by some of the younger members of the profession who felt a natural hesitancy about taking part in the proceedings of the venerable old parent society. It was their ambition to have an organization where they might meet men of their own age, and freely discuss topics on which they did not feel capable of locking horns with the older war horses. It was organized by graduates of the

Chicago College of Dental Surgery, and its membership was for a time confined to graduates of this school, but finally the meetings became so interesting that a request was made to admit others into the Society and enlarge its scope. This was done, and the Society now has the largest membership of any in the city. At the last annual report there were about two hundred active members. It is essentially a young men's society, and many a budding genius gets up there for the first time in public, and commences his career of swaying the future destinies of dentistry.

And let me pause to say, Mr. Editor, that the appearance of a young man on the floor in his initial effort before a society always holds for me a fascinating interest. My heart goes out to that young fellow, and I wish it were ordained unto me to be a power behind the throne to help him say the things he wants to say. Of course he is never able to express himself as he wishes in that first effort. He sees staring at him innumerable eyes, and he hears the thumping of a tremendous heart in his breast—in fact that precious heart of his suddenly takes on a series of the most extraordinary convulsions that carry it up and down, and back and forth, through the entire reign of his anatomy from the diaphragm to the anterior borders of the tonsils, so that the beautiful thoughts he had in his mind when he arose are scattered to the four winds of heaven. He is hardly able to breathe freely, let alone trying to speak. He says something, he scarce knows what, and then he sits down with his cheeks burning, his hands cold, and his lips parched. He has two vivid impressions on his mind at that moment—the memory of how his knees knocked together while he was standing, and the conviction that he was a monumental ass for ever getting up. Then he begins to think of the things he might have said, and should have said, and the things he had intended saying. Let me hasten to assure him, if he chances to be reading this, that practice will remedy one feature of his failure—he will acquire the ability, after several attempts, to say the things he had intended saying. But let me in the same breath also warn him that he will never, no matter how old a warrior he may become in the battles of public speaking, be able to grapple with that greatest of all human bug-bears—the “might have been.”

Ah, those things we should have said! How insignificant are all the things we have said to the few brilliant ideas we left unexpressed. I am probably, for my years, as old a sinner as most men in this habit of letting others hear my voice in dental societies, and yet I am prone to take the reader sufficiently into my confidence to confess that I seldom or never go away from a meeting where I have spoken without the haunting sense of humiliation and defeat on account of having overlooked the one

or two things needful to make my remarks worth the powder to blow them into the printed proceedings. I am often led to wonder if I shall ever succeed in curing myself of this infirmity, but the fact that I seem to grow worse instead of better makes me despair. The things I say seem so insipid beside the things I think when it is no longer possible to say them.

But to come back to the young man, and to indulge a little further along the line of personal impressions. I have said that I scarcely sympathize with a beginner in his maiden effort before a society, and I have always endeavored—and always shall—to encourage him under those trying conditions. It has fallen to my lot in my experience in society work to give and take some pretty hot shot in scientific discussions. Some of my best personal friends have been my most active opponents in these forensic skirmishes, and I have spared them not a whit when it came to the expression of a conviction on any debatable question. But never in all my experience as a speaker have I knowingly criticized a young man who had just appeared in his maiden effort. His ideas may be crude, his reasoning erroneous and his language halting, but his inexperience throws up a shield against which I cannot find it in my heart to battle. He is usually at such a time so sensitive of criticism, that it is little short of cruelty to weigh his ideas in the balance of debate. He is prone to take a well-meant expression of critical opinion in the light of a personal affront, and often retires from this first skirmish with feelings injured past the recovering point. We have not too many speakers and writers in our societies at best, and all encouragement should be given to the beginners. And yet in this connection let me whisper a word in the ear of these fledglings before closing. The first thing for a young man to learn in public discussions is that the mere questioning of his opinion on any scientific subject should never be construed into a personal attack. Personal feeling is something apart from scientific opinion, and the beginner should early learn to distinguish them.

Enough for this time, Mr. Editor.

A GEM FROM A GENIUS.

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—I consider you beneath my notice, but in regard to your claim that if we put assistants on our patients they would be unfair to regular students, and it would be unfair to regular licensees, I guess you and me don't think alike. [Thank you for the compliment. ED. D.D.J.]. You want just to show how it is unfair,

because what is a man to do who wants to run sum other show to make a doller, is he a going to shut up his door and take in his show-cases, and get no show, or is he a going to have sum assistants to put on his patients when hees out, and if he ain't, what is he a going to do. If ther were many more peple like you, and many who did like you, we wood have to turn stable boys.

Yours, ———

[And then you would be in the odor of your sanctified element. If there were many more dentists like you, or who "did" like you, it would be more professional and respectable to be a stable boy than a dentist. You would be more at home if you'd abandon your license to practise dentistry and get a job in a stable. ED. D.D.J.].

WHAT ARE REPUTABLE MEN TO DO?

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—During the present year (I am writing in December, 1895) you have given us repeatedly many good reasons why we should be more united as a profession. There is no better proof of the weakness of disunion than the condition of our profession to-day, dragged through the mud of quack methods by men who do not care for decency, for morals, or for anything but the dollar. Tell me what has brought about this state of affairs, not only in Toronto, but in almost every town of Ontario? And where is it to end? Do you suppose we will ever be able to raise our fees to the old standard again? And the question occurs, Are we to punish the public by giving them inferior services, or are we to punish ourselves and our families by being satisfied with inferior fees? As you very justly said, the more an advertiser lies, the more a portion of the public seem to like it. The public learn what they "know" from these advertisements. Are we to be forced by circumstances, to follow the lead of these advertising frauds? Tell us plainly, if a man has a family and himself to support, what is he to do, if he finds that quack methods are captivating his patients? He cannot live on air and ethics.

Yours,

PERPLEXITY.

[We expect a very interesting discussion, *pro* and *con*, on this subject.—ED.]

WHY NOT MAKE PROSTHETIC DENTISTRY A TRADE?

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—Why not separate the “work” of making artificial sets of teeth from the science and skill required to save them, and let us have our laboratories, as we might have any other mechanical investment in which dentists can legitimately put their money, a distinct and recognized branch of a trade. The surgeon does not make wooden legs or trusses, but here is recognized a very necessary and respectable branch of manufacturing, in which trade prices and trade profits prevail. Unfortunately in our ranks we have a number of men, whose previous means of living brought them an income of from \$600 to \$800 a year, and who seem satisfied to do a peddling sort of practice, and work like slaves, in dentistry, for the same result! It is not necessary to write a treatise to show the futility of such practice. The man who does it ages before his time; he is

“Dipping buckets into empty wells,
And growing old in drawing nothing up.”

If we separate our mechanical from our operative department—leaving room for the exceptional cases which are highly profitable—if we receive patients who shop, and who have been educated by the methods of the departmental stores to expect bargains in teeth as they get bargains in boots, we can treat them on a different basis from patients who are profitable; we can “run” tooth shops and employ “assistants” at departmental store wages to take impressions and do the “work.” If the public of Ontario and Quebec mean to take their education in dentistry from the quack advertisers of Toronto and Montreal; if they wish to be served in that way, why, let us accommodate them. We can treat our desirable patients otherwise. C. B.

IS THERE ANYTHING IN “CATAPHORESIS”?

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—Any one familiar with the history of the many so-called “improvements” in dentistry for the last quarter of a century, cannot deny that while we have had improvements of a decidedly valuable character, we have also had some decidedly degenerate introductions quite as much in practice as in ethics. Most of us have only to recall the recollections of our past enthusiasm,

when, like the fools of the present time, we, also fools, rushed in where our wiser and cooler confreres stood smiling. Too many of us then, as now, thought that other people could do our thinking, and that inventors were infallible, and that the class of whom David spoke in his haste were all dead in spite of the French proverb, and so it made no matter. The fools rushed in to anæsthetics—occasionally killing somebody; they rushed into a lot of bases and bone fillings, and paraphernalia and fads, and it never occurred to them that they needed to improve their own minds and cultivate their own modesty. Oh, no! the bantams must crow, and crow they did and do.

Now I do not sneer at this class. They would be more admired by us if their motives were different, and if they had more caution. It is a foolishness to suppose that it is a merit to be early in the field with experiments. It is a suggestive fact that nitrous oxide was introduced into Canada by the leading quack; that the local anæsthetics, even vulcanite, etc., were brought into practice by quacks who knew nothing about them and cared for nothing, like our modern quacks, but their own selfish interest.

Cataphoresis is being handled just the same. The danger of too high voltage; the local effects upon the delicate tissues about the teeth; the risk of pulp death—that is nothing to the enterprising young man. He is one of the hereditary dentists who “never fail.” It is curious how men deceive themselves. It is not less curious why they deceive others. At the Chicago Dental Society meeting last October my friend, Dr. C. P. Pruyn, who is no mere composition of uneducated conceit and frantic faddism, denounced the boasts of “favorable results” which were being falsely circulated. Dr. Pruyn has had every instrument, and has had experience. While I freely acknowledge that there is “something good in cataphoresis,” I wish to warn my confreres that there is, too, something highly dangerous in it, and that if it is a toy for careful men it is a traitor for fools. I will let Dr. Pruyn speak for himself.

Dr. C. P. Pruyn.—The subject of cataphoresis has been referred to this evening, and most of the reports of its use have been favorable. I think it is only just that we should report our unfavorable results as well as the favorable ones. I have had two or three different instruments in my office and have thoroughly tested them. All of them connected with the street current have given trouble, and whether it is the fault of the wire that goes to our building, I do not know. The manufacturers of the instruments have failed to solve the trouble. I desire to report a case where I filled a labial cavity in a superior central incisor, the cavity being only slightly under the gingival border, the clamp placed in position, nicely exposing the cavity. I applied the

electric current and the patient experienced some pain during its use. Upon the removal of the rubber dam I found that we had destroyed the gum tissue nearly half way up the root; we had burnt the peridental membrane, also leaving a portion of the alveolus exposed nearly one-quarter of an inch. Of course, this tissue sloughed after a little while, although we used the ordinary precautions to prevent it. I had the instrument-maker try and find out what the trouble was, but he has failed to offer a perfect solution of the difficulty.

In another instance I prepared a cavity in the mesial surface of a molar, adjusted the rubber dam, applied the solution in a similar manner to the case just reported, and we had the loss of a large amount of gum tissue. I report these unfavorable cases so as to give you the benefit of the mistakes I have made, or rather the failures I have had in the use of the cataphoretic obtunde. If any of you can enlighten me so that this trouble can be avoided, I shall be glad not only on account of myself, but for my patients.

Dr. Davis.—How high was the voltage?

Dr. Pruyn.—Not over fifteen volts.

Dr. Clifford.—What per cent. solution of cocaine did you employ?

Dr. Pruyn.—Ten per cent.

Dr. Clifford.—What kind of solution.

Dr. Pruyn.—Aqueous.

Dr. Wassall.—Did it cook or dry the tissue so that it appeared like a carbolic acid eschar?

Dr. Pruyn.—It had the appearance of a severe carbolic eschar.

Dr. Clifford.—Was the applicator attached to the clamp?

Dr. Pruyn.—No. There was a clamp on the tooth, however, and the applicator was held in the hand.

Dr. Clifford.—Do you think there was any possible chance of the current touching the clamp?

Dr. Pruyn.—It is barely possible, but I think not. The rubber holder came in contact with the steel clamp.

Dr. Wassall.—Where was the negative pole?

Dr. Pruyn.—The manufacturer has been trying to find out, but he was not sure. I have had the wire marked so I would know in taking it off and putting it on which was the positive and which was the negative pole.

A Member.—What instrument was used?

Dr. Pruyn.—The McIntosh. Then, too, Dr. Mawhinney has had several cases of electrical shock from the use of the cataphoretic current. Everything would be going along nicely, when the patient would suddenly receive a severe shock. He has tried to insulate every part which he thought would come in contact with the chair. It looks to me as though a cell battery would be

much more safe and reliable than to have the connection made with the street current. Several electricians say it is almost impossible to have the instrument connected with the street current and get satisfactory results. You know that our electric lights vary from time to time; they vary in intensity according to the amount of current used and turned off at some other points.

A Member.—Was it a case where the tooth was badly decayed?

Dr. Pruyn.—No. It was only a small cavity on the labial surface of the central incisor, so that it was not necessary to reach up very high with the clamp.

DENTAL TRAVELLERS AND THE JOURNAL.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—I once remarked to Mr. S. A. Craige, the travelling representative of the S. S. White Co. in Canada, that I had known him for fifteen years; had met him in business in Canada repeatedly all that time, and that I had never once known him to "carry stories" from one dental office to another; to say even an unkind, much less a malicious thing, against either a dentist or a rival depot. I am free to say it has always been my experience of the representatives of the White and other American companies, however earnestly they push for business in Canada, that they confine themselves strictly to business principles. Mr. Craige might do you a service if he would instruct some of the travellers for one of our Canadian dental depots in the business of holding their slanderous tongues even as a matter of business tact, if not as a matter of morality. I have ceased to do business with men who make it their business, whenever they can, to depreciate and damage the only dental journal we have in Canada. I, for one, shall be very glad to testify in court, if you wish, and help to protect the publisher in his efforts to give Canadian dentists at least one Canadian journal. I do not object to the agents of this firm canvassing for a foreign journal. It is easily seen for what this is done. But the Canadian profession is not dependent in the smallest degree upon any one depot in Canada. We can get as good, and in fact better terms, from others. If a Canadian firm expect Canadian business they must not expect to get it by damaging a Canadian journal, either directly or indirectly. And I go so far as to maintain, as a legitimate and just matter of business, that Canadian dentists should not buy one dollar's worth from any dental firm in Canada or the United States which does not patronize the JOURNAL which it is our professional and business interest to maintain. This is perfectly consistent with journalistic

independence, and as for us, who are your readers and the patrons of the depots, we have a perfect right to make our purchases where and how we please. Each one of us is a co-partner in the JOURNAL. We directly share in the profits of its success. The more the advertisers do for it the more the publishers and editors can do for us. Why then should we not in this matter do justice to advertisers?

Yours,

Toronto.

LICENTATE.

IS IT FAIR TO BOOM ADVERTISERS?

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—Is it fair to ask your readers to confine their patronage to the dealers alone who advertise? It seems to me a very unreasonable proceeding.

Yours, * *

[You might as logically inquire if it is fair to try and make a Canadian journal pay expenses. You might as well say that to ensure the payment of our printer is "a very unreasonable proceeding." We have had numerous examples of the failure in Canada of literary and other journals which depended upon their readers for their existence. We have evidence of the immense success of such magazines as *Harper's*, *The Century*, *Scribners' Monthly*, and the great British weeklies, not to omit the *British Medical Journal* and other leading scientific papers since they got the large support of advertisers. What has been the result? *The subscribers get the direct benefit* in better periodicals. Each issue of this JOURNAL costs all the publisher gets for it from subscribers. It is the advertisements which give it a backbone. Do you suppose our advertisers give this patronage for the fun of spending their money? They do not object to rival firms advertising in the same issues. But they certainly expect to get a good deal more back in the way of business than their advertising costs. In asking our readers to give the preference to the dealers who advertise in this JOURNAL, we do so directly in the interest of

1. The subscribers.
2. The advertisers.
3. The JOURNAL.

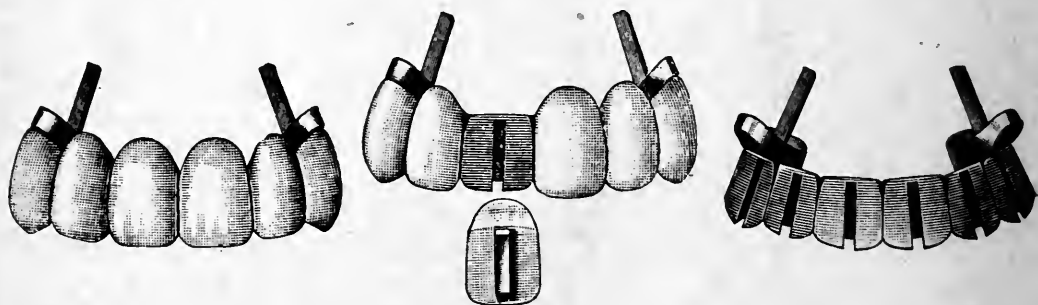
Why we should adopt any policy that would in any way benefit those who do not help us, and who do not help the profession to maintain the only Canadian dental journal we possess, would puzzle a Toronto lawyer to understand. To help those who help us is both "fair and reasonable."—Ed. D.D.J.].

New Inventions.

MASON'S DETACHABLE PORCELAINS.

Mason's system of detachable porcelains does not in any way change the appearance of the perfectly made crown of to-day. About sixteen years ago, porcelain facings, soldered to gold bands, were put in general use, and closely after came the bridge work, very crude at that time, but advancing rapidly to the almost perfect construction of to-day.

Perfect but for one great fault, viz.: the uncertain condition of the porcelains after soldering and cementing in position. So long as the piece is in service, the porcelains are apt to separate from their backings. The profession has long seen the necessity of overcoming this annoyance, and there have been scores of efforts to produce detachable porcelains, but none have been invented, so that they could be manufactured and sold to the dentist for his immediate use.



Detachable porcelains are just as important to crown and bridge work as crown and bridge work is to dentistry. For a number of years Dr. Mason has been seeking a mode of constructing the porcelains so that they would be separate, but have a perfect contact with the backings, and be equal to the facings now in use. Through that effort he has produced a system of dovetail and groove to match, and a process of manufacturing whereby a porcelain is made independent of its backing. Any porcelain from one mould will fit any backing made for that mould, or universal in their use. A few illustrations will help you more readily to understand the process. Fig. 1 shows lower canine crowned and cemented to its root. Fig. 2 shows its porcelain sliding from its backing. Fig. 3 shows porcelain and backing separate. This illustrates the mode of constructing the anterior upper and lower six teeth. Fig. 3 also shows a metal dovetail fitted perfectly to the back of the porcelain, and extending a little beyond its cutting point; it also shows its solid backing with a groove to receive the

dovetail. The tooth with its dovetail and backing is fitted to the band by grinding out where necessary. Then the gold backing is waxed to the band, and after wax sets, the porcelain is removed from its backing by taking hold of extended portion of dovetail, and drawn from same. The crown is now ready to invest. First, the dovetail groove is filled with Mason's Groove Investment Material to keep out solder (which it will do perfectly), then the piece is invested as usual, letting the plaster come well over the cutting point of backing. The piece is now ready for soldering. Heat up and solder and cool off as quickly as you like. After removing from investment, see that the groove is thoroughly cleaned and dried; also dovetail on porcelain. Now take some chlorapercha, quite thick, fill groove, and press porcelain in position. Saw off (don't cut) the extended portion of metal dovetail, then finish as usual. Porcelain can also be cemented on with cement or sulphur.

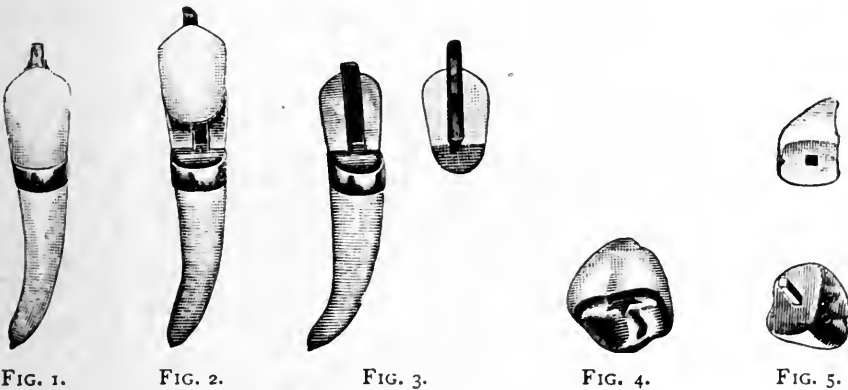


FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

For use as a dummy, articulate to position, remove and solder stop to neck of backing to prevent porcelain from slipping upward, replace on model, join parts with wax, then draw the porcelain and invest. The condition of the posterior teeth is changed somewhat. Fig. 4 shows a molar dummy, with its cusp and porcelain together, having the same general appearance of molar dummy in common use, with the exception that the porcelain takes up more space on its palatal portion, making a saving of gold.

Fig. 5 shows the dummy parted, giving view of the joining parts of the solid gold cusp, the upper buccal portions sloping upward and backward toward the ridge, and having on its face a square pin extending upward and forward. Fig. 5 also shows porcelain with square hole extending just above the cusp portion, upward and outward, to receive square pin fitted to cusp. After placing cusp and porcelain together, the dummy is ready to grind in position. Wax parts together, remove porcelain and solder. Cement porcelain to pin, and finish as usual.

The advantages to be gained by this method are many, and can only be appreciated by practice. The first advantage will be, that you don't have to place your teeth under the flame of the blow pipe. Second, you are not annoyed by the changing of color which takes place in soldering the old way. Third, you have a solid backing, without bubbles. Fourth, you can heat up your invested piece quickly and not have to take the usual care, and also cool off quickly. Fifth, the small amount of solder you have to use—just enough to join parts together. Sixth, saving your porcelain from being etched by borax. Seventh, you are able to fit a bridge, releasing the strain by cutting and resoldering, and not have the porcelain interfered with. Eighth, the most important of all, the amount of time saved to the busy dentist will equal about half the time spent in the old method, thereby saving time, temper and dollars. Repairing is but the matter of a few minutes. You put a tooth of mould No. 22 on, and if it should break, you may order an exact duplicate of same and slip it in position, keeping yourself in good humor and giving your patient the greatest amount of satisfaction.

The porcelains are of the S. S. White manufacture. Their moulds used for plate teeth are also used for our make of porcelains. We also supply bicuspid and molar veneers.

Proceedings of Dental Societies.

ONTARIO DENTAL SOCIETY.

The eighth annual meeting of the Ontario Dental Society met in the new College building, Toronto, on the afternoon of Wednesday, September 30th, 1896. The President, Dr. W. A. Leggo, occupied the chair. Dr. A. J. Marshall, Secretary, read the minutes of the 1895 meeting, which on motion were adopted. The President appointed Drs. Baird and Allen as auditors and Drs. Klotz, Kilmer and Frank as a Committee on Membership and Ethics.

The names of L. G. Campbell, Markdale; R. F. Morrow, of Peterboro'; and Chas. McKinley, Georgetown, having passed the Committee on Membership and Ethics, the Secretary was instructed to cast a ballot for their election.

Dr. C. P. Lennox, Treasurer, read his report, showing a balance on hand of \$59.25. On motion of Drs. C. E. Klotz and A. M. Clark, the Treasurer's report was received and placed on file.

The Secretary, Dr. Marshall, read a report of the work of the year with a communication from Dr. G. V. N. Relyea, regretting his inability to be present on account of illness in his family.

Moved by Dr. A. H. Allen and seconded by Dr. G. S. Martin, that the Secretary's report be received, and that an order be drawn on the Treasurer for the amount of the Secretary's expenses for the year, amounting to \$14.50. Carried.

On motion of Drs. Brownlee and Franks, the thanks of the Society were tendered Dr. Marshall for his efficient success as Secretary during the year.

It was moved by Drs. Baird and Allen, that the Treasurer be instructed to try and induce all members to pay up their fees. After some discussion this was laid on the table.

The election of officers resulted as follows:—President, Dr. W. A. Brownlee, Mount Forest; Vice-president, Dr. J. A. Marshall, Belleville; Secretary, Dr. G. S. Martin, Toronto Junction; Treasurer, Dr. C. P. Lennox, Toronto. Executive—District No. 1, Dr. R. E. Sparks, Kingston; 2, Dr. R. F. Morrow, Peterboro'; 3, Dr. J. F. Adams, Toronto; 4, Dr. C. E. Klotz, St. Catharines; 5, Dr. Ludworth, Ingersoll; 6, Dr. A. H. Allen, Paisley; 7, Dr. W. R. Hamilton, Stratford.

Dr. Brownlee gave notice that he would at the next session move to amend the constitution by adding section 7, "If any member neglects to pay his fee for two years his membership shall be void and his name struck from the roll."

It was moved by Drs. W. E. Willmott and J. F. Adams, that Dr. G. S. Martin be appointed to prepare a report of the meetings for the DOMINION DENTAL JOURNAL, and that the Secretary be instructed to employ a stenographer to take the proceedings of the Thursday evening meeting. Carried.

At the evening session Dr. Brownlee moved, seconded by Dr. Lennox, that the constitution be amended by adding section 7, "If any member omits to pay his fee for two years in succession his membership shall be declared void and his name struck from the roll."

Moved in amendment by Drs. McLaughlin and Leggo, "That all members in arrears be notified by the Secretary that on payment of the present year's fee of one dollar they shall be considered in good standing." After an animated discussion the amendment was put and carried.

An important discussion then took place on the proposal of the Board of Directors of the Royal College of Dental Surgeons to grant licenses to practise within a limited area to certain persons who have practised dentistry from ten to twenty-eight years without a license; these licenses to be granted in hope of putting an end to the demands for licenses to practise being made every year before the Private Bills Committee in the Legislative Assembly, and also that more ample powers respecting the penal clause of the Dental Act be granted to the Board by the Legislature.

After a spirited discussion, taken part in by Drs. H. T. Wood, J. B. Willmott, A. M. Clark, A. H. Allen, Smith, Brownlee, Leggo, Marshall, McLaughlin, Martin, Adams, and others, it was moved by Dr. Leggo, seconded by Dr. J. F. Adams, that this Society is in favor of the proposal of the Board of the Royal College of Dental Surgeons *re* legislation and the granting of limited licenses to certain persons. Carried unanimously.

The special business being at an end, Dr. F. J. Ross read his paper on "Porcelain Work." Dr. C. P. Lennox opened the discussion, which was taken up by Dr. Capon, who gave a description of anchoring large porcelain corners by means of a loop of platinum instead of pins.

On Thursday morning, Dr. R. E. Sparks read his essay on "The Dental Perceptor," which proved to be timely and practical. Dr. Moyer, of Galt, followed, adding many points of value on this important question.

The answers to the question, "Are compound fillings desirable? If so, give proper combination and utility," were read by Drs. Leggo and Moyer; Dr. Morrow being absent. The discussion was lively and interesting, and was taken part in by Drs. Sparks, Waldron, Marshall, Brownlee, and others.

Dr. Sparks advocated adding metal filings to cement fillings. These particles of metal would act as nuclei around which the cement would harden, and as cement fillings wear away as well as dissolve, the metal points, soon exposed, would greatly add to the resisting power of the filling. Builders add sand to lime for the purpose of increasing its density, and the metal filings would have the same effect. He also advocated amalgam in combination with gold as a filling. Never saw a case of anything like a deleterious electric action set up by the contact of these different metals. Would like to ask Dr. Moyer why tin and gold would keep out bacteria.

Dr. Leggo claimed that sand added to lime formed a chemical combination, while metal filings added to cement did not, so that the cases were not analogous. The metal, on the other hand, lessened the density and prevented setting, and the filling dissolved more readily. It was something like the case of the boy driving a cow, and when a lady asked him if the cow kicked, the boy said, "sometimes she doesn't." Sometimes cement fillings don't dissolve, even under seemingly adverse circumstances.

Dr. Moyer, in answer to Dr. Sparks, said that in case of tin and gold stannic acid was formed, and bacteria could not live in it. Respecting failure of cement fillings, in some cases it is caused by insufficient cutting away of decayed dentine.

Dr. Waldron said that not only will cement dissolve rapidly in one mouth and not in another, but in the same mouth of teeth filled

at the same sitting, under apparently the same circumstances, one filling will dissolve out in a few months, and the other will remain perfect for years. As to whether it was acid or alkaline fluids in the mouth that acted on fillings of oxyphosphate of zinc, he thought that it was sometimes one and sometimes the other. This is due to the materials not being well proportioned in mixing. If too much of the fluid is added alkaline fluids will attack; if too much powder, then acid fluids are more destructive than alkaline.

Dr. Marshall advised an oxchlorate lining for a cavity as a better antiseptic than oxyphosphate. Had used a combination of gold and amalgam for years with good satisfaction.

Dr. Brownlee thought that cements are not equally mixed, and thus disintegration may be caused in some parts of cavity. We may often find fillings softened in parts by food fermentation. The use of amalgam at a cervical border before using cement is often advisable. Subject passed.

Dr. Waldron's paper on "Cataphoresis" was followed by a clinic by Dr. G. Adams Swann, of Toronto, excavating a sensitive cavity in the mouth of Dr. Davison. Not having connection with street current Dr. Swann was not able to use his volt selector, using instead dry cell battery, furnished for the occasion by Dr. J. F. Adams, and the new ball-bearing engine presented to the Dental College by the S. S. White Company. The clinic was very successful in obtunding the dentine so that it was prepared with comfort for filling. An instructive discussion on cataphoresis was introduced by Dr. F. J. Brown, of Port Hope, who began by objecting to speaking of electricity as the anæsthetic. It is only the force used to drive in the anæsthetic agent, which in this case was cocaine. He questioned the advisability of using so high percentages of cocaine, and read a short paper enumerating the advantages of eucaïne and cocaine. Dr. F. Capon followed with several cases in practice showing usefulness of cataphoresis. Patients now ask for it and will not submit to pain without suggesting use of battery. Often, if busy, the patient may be left to turn on current while he sees another patient in another chair or goes to lunch. Had great success in treatment of periostitis by driving in iodine and aconite. Subject passed.

The meeting then adjourned to attend the formal opening of the new building of the Royal College of Dental Surgeons of Ontario by His Honor the Lieutenant-Governor of Ontario.

At the evening session Dr. Leggo, retiring President, delivered a brilliant address calling for loyal support of the Ontario Society by the profession of the Province and referring to the advantages of professional intercourse.

The address of the evening was delivered by Dr. Thomas Fillebrown, Dean of the Dental Department of Harvard University,

on the "Common Sense of Hypnosis" [the following is an abstract of the address], which the speaker said has ever been a sort of wonder to the uneducated mind. To them there is something uncanny about the hypnotist. It is, however, really a common faculty, such as is the faculty for acquiring mathematics. Daniel Webster, who astounded the world by the brilliancy of his intellect, could not whittle out a bowkey.

The principal thing I wish to show is that hypnosis has a common sense, practical, useful side. First let us take a glance at its history. It is old as the human race, having been practised in India by the priests and fakirs. It was introduced to Europe about 1700, and to England in 1843. Mesmer, in the beginning of eighteenth century, put it into a sort of scientific form and called it mesmerism. Grimes, of Louisiana, called it electro-biology. Dr. Braid, London, proved it to be a subjective condition—a susceptible condition of patient. Dr. Leabault, of France, discovered what Dr. Braid had not, that suggestion is the active force, 1850-60. Quimby, in Maine, called it wisdom and used it for its healing power.

Suggestion is the active force in all the curative isms of to-day, whether known as Christian Science or mental healing. Hypnotism is simply a suggestible condition, easy to many. Some are so constructed as to be easily influenced by suggestion. Dr. Myers recognizes two distinct layers or parts in the mind. We know we have two kinds of powers, voluntary and involuntary.

You all have some habit of thought you can't control, even though you may be ashamed of it. You may for example be unable to enter a dark room without a feeling of dread. You have a class of thoughts you can't get rid of, a layer of thought uncontrollable as organic functions.

A lady came to me who had been to a fortune teller, and had been told that some terrible calamity would befall her husband. She paid little attention to it at first, but gradually the thought became an uncontrollable fear and she was positively unable to pass a day without assuring herself that her husband was safe. This fear was banished by the suggestion that it would do so, and the normal feeling that he was safe took its place.

A thought settles down often into the subconscious layer beyond our immediate control, but it may be brought to the surface again by some circumstance. One mind must be a strong one, the other a good listener. It is produced by thought transference. We may speak of the mental action as a vibration going out from one mind to another. By putting the subconscious layer asleep we have a non-resistant condition—a condition of rest. A restful operator makes a restful patient. Fear is our greatest enemy, mentally and physically. Nine-tenths of the heart palpitation and

dyspepsia is produced by fear. Some sudden disaster, fire, loss of property will turn a man's hair white and make him prematurely aged in a night, showing the tremendous effects of fear on the physical powers. The pain we suffer is nine-tenths fear. Granting this, the practical side of hypnosis, as applied to dentistry, is recognizable. We take a patient trembling with apprehension and in a confident quiet tone we advise restfulness, an easy, relaxed posture in the chair. A few long, deep, reposeful breaths, then an assurance that the operation will not hurt, and if the patient is one who can be influenced at all by suggestion there will be an absence of pain in operating.

A perusal of a little book entitled, "Power through Repose," by Miss Call, published by Roberts Bros., Boston, will repay its readers many times over.

In the use of therapeutic obtundents suggestion is the chief power. It is essential to the effect of all ordinary medicines.

Are there dangers in the use of hypnosis? Undoubtedly. But are we not to use anything that may be turned to a bad purpose? Take personal influence. A man goes down the street in this susceptible or suggestible mood and is invited by a friend into a saloon where he becomes drunk or is led into other sin. Had he been met by another stamp of friend he might have gone into the Y.M.C.A. and had his soul saved. Is personal influence not to be exerted because it may be bad? I would not insult this audience by any warning against the dangers of hypnosis. It is the power of all homœopathic remedies. It is sure to come into general use in dental practice and to be acknowledged the most essential element in therapeutics.

Dr. Fillebrown recited a number of cases in practice, both dental and medical, of the successful use of suggestion such as curing rubber sore mouth, sore throat, sensitive dentine, after which he demonstrated its usefulness in excavating sensitive dentine for two dentists present who had sensitive buccal cavities.

Dr. J. B. Willmott opened the discussion by complimenting the lecturer of the evening on the extremely lucid explanation given on this hitherto mysterious subject. Never before had he heard any lecturer on hypnotism who succeeded in so completely clearing away the mists surrounding it. In concluding his remarks Dr. Willmott desired to emphasize the advice given particularly to young practitioners, "get perfect control of yourself."

Prof. J. J. Mackenzie then read his paper on "Fermentation and its Relation to Dental Caries," illustrating his remarks by showing a number of experiments.

Dr. Willmott referred to the subject of the essay as the interesting problem in dentistry. The acid biproduct of the bacteria is the destructive agent. There is need that we urge upon our

patients the need of cleanliness. This should be taught early, so that it may become a habit. The use of the toothpick, although considered to be bad form in polite society, he believed to be one of the most useful agencies in the conservation of the cleanliness and health of the dental organs.

Dr. Sparks wished to inquire if there was any connection between the organic acids and the acids formed in the mouth—lactic acid.

The Membership and Ethics Committee brought in a favorable report on the names of the following additional candidates for membership: W. R. Hamilton, Stratford; G. P. Allen, Mount Forest; F. J. Ross, Toronto; F. Capon, Toronto; Harold Clark, Toronto; Wm. Wunder, Toronto; Geo. Cæsar, Toronto; C. E. Pearson, Toronto; H. E. Eaton, Toronto; E. D. Washington, Barrie; L. Clements, Kingston; D. Hansell, Kingston; F. F. Burgess, Colborne; A. M. Clark, Woodstock; J. A. Smith, Windsor.

On motion of Drs. Klotz and Frank, the Secretary cast a favorable ballot for their election, and there being no objections they were declared members.

FRIDAY MORNING, OCTOBER 2ND.

Dr. D. Bairds read his paper on "Silver Nitrate."

Dr. Sparks mentioned the use of silver nitrate in cases of aphthous sores in the mouth.

Drs. Allen, Marshall and Brownlee entered into the discussion.

INCIDENTS OF OFFICE PRACTICE.

Dr. Adams, of Whitby, described a case of ankylosis of maxillæ. A patient had suffered exceedingly and had applied to several sources for relief with no success. Reduced by appliances exhibited by placing between bicuspidis one on each side held in position by strap over head. The description was well received and some discussion followed.

Third question on programme was answered by Dr. A. H. Allen, Paisley.

Dr. Abbott, of London, said he practised pulp capping just as the essayist had described, and never devitalized unless for crowns, treating and curing even partially destroyed pulps, and filling over them, making them quite comfortable for a time.

Dr. Capon, Toronto, also practised pulp capping, never having a failure. He used Gilbert's varnish for first coating and then the lining pressed carefully over that. The lining he used was a fluid combination of creasote, cassia and cloves mixed with the powder oxyphosphate.

Dr. Burgess, although only in practice a short time, was so far satisfied with pulp capping carefully done.

Dr. Erdt, Stratford, did not believe in capping at all. Had no success where he was.

Dr. Marshall, Belleville, considered that of the favorable cases about seventy-five per cent. might be saved, but he did not believe in capping badly exposed pulps.

Dr. Adams, Whitby, thought in many cases, such as exposures in lateral incisors, there would not be room for the lining and capping described by the essayist, but Dr. Allen and Dr. Capon claimed to be successful with even these.

Dr. Baird, Uxbridge, did not believe in capping when badly exposed.

Dr. Brownlee, Mount Forest, believed in capping so long as there was not too great an exposure and no pain at night. Get accurate history from patient if possible, and if the tooth ached at night do not cap, as capping use cement powder with creasote.

Dr. Webster urged great caution in selecting cases for capping and distinguished between pulps exposed by decay and aching and pulps freshly exposed by the excavator. Wished light on what to do with teeth that had ached two or three hours, one or two days, or one night.

Dr. Allen, in closing discussion, cited a case in his own mouth filled by a Toronto dentist, where an exposed pulp had been covered with oxyphosphate of zinc, and was still living and well.

This ending the programme, it was moved by J. A. Marshall, seconded by C. P. Lennox, that the matter of the place of meeting for 1897 be left with the Executive. Carried.

Moved by R. E. Sparks, seconded by A. H. Allen, that W. A. Brownlee, G. S. Martin and J. Frank Adams be a special committee to attend New York State Dental Convention in May, 1897, to convey greetings of the Ontario Society, this to be at expense of committee. Carried.

Moved and seconded, that we adjourn to meet at time and place decided on by the Executive.

G. S. MARTIN, *Secretary*.

ROYAL COLLEGE OF DENTAL SURGEONS OF ONTARIO.—ELECTION OF OFFICERS.

The biennial election of a Board of Directors of the Royal College of Dental Surgeons took place on December 9, 1896, resulting in the re-election by acclamation of Dr. G. E. Hanna, Ottawa, District No. 1; Dr. H. T. Wood, Toronto, District No. 3; Dr. A. M. Clark, Woodstock, District No. 5; Dr. W. A. Brownlee, Mount Forest, District No. 6. In District No. 2, Dr. J. A.

Marshall, Belleville, was re-elected in a contest with Dr. Fred J. Brown, Port Hope, by a vote of twenty to eleven. In District No. 4, Dr. R. J. Husband, Hamilton, was re-elected in a contest with Dr. J. E. Overholt, Hamilton, by a vote of twenty-seven to fourteen. In District No. 7, Dr. G. C. Davis, London, defeated the late member, Dr. J. A. Smith, Windsor, by a vote of twenty to ten. Dr. J. B. Willmott was re-elected by the Faculty as their representative. In the three districts in which there were contests, 122 ballots were tendered, of which twenty were rejected for non-conformity to the requirements of the statute and by-law. In no case would these votes have changed the result.

J. B. WILLMOTT, Secretary.

Abstracts.

Edited by G. S. MARTIN, D.D.S., L.D.S., Toronto Junction.

ALCOHOL AS AN ANTIDOTE TO CARBOLIC ACID.—Dr. B. J. Cigrand uses alcohol on burns caused by carbolic acid. Immediate relief is given and the eschar soon disappears.

CLEANING THE HANDS.—J. H. Drexler, in *Dental Office and Laboratory*, advises use of spirits of turpentine. Rub well all over the dirt, wipe with a dry cloth; then use soap and water. After drying, use vaseline or glycerine.

THERE is no profession, I believe, which is paid less for the enormous amount of energy, physical, psychical, and moral forces that are spent every day in our labor, than dentistry, and if there is any profession that should not be practised for God's sake, it is dentistry.—*Dr. Hofheinz in Cosmos*.

GUTTA PERCHA.—Professor Gray uses in a cavity before filling with gutta percha, common resin cut in chloroform. The heated gutta percha is pressed in and adheres to the walls like cement. In the mouths of his own children he has had an opportunity of watching it closely, and finds it entirely satisfactory.—*Dental Register*.

DENTAL INSPECTORS FOR SCHOOLS.—The Ontario Board of Health recently adopted the following resolution: "That dental inspectors be appointed by local boards of school trustees to periodically visit schools and examine children's teeth, and that a dental hospital be started in Toronto for the benefit of the poor children; and these recommendations be urged upon the attention of the Minister of Education."—*Medical Mirror*.

To prevent rust on instruments the *Lancet Clinic* advises dipping steel, iron, nickel or copper instruments in five grammes alcohol containing some alkali, such as one or two grammes of borate, carbonate, bicarbonate or benzoate of soda.

REMOVING STAINS.—A solution of hyposulphite of sodium in water will remove iodine stains from linen, cloth, skin, and, in fact, from anything, almost instantly. The fresher the spots the quicker the action of the hyposulphite.—*J. C. Emmerling in Dental Office and Laboratory.*

TOXÆMIA DURING COCAINE CATAPHORESIS.—Dr. Henry J. Moore, Frankfort, Germany, records in the January *Items of Interest* a case of toxic effects during the application of cocaine to a pulp by means of the electric current. He subsequently found the foramen to be abnormally large, thus allowing the cocaine and the current to pass readily.

LINING ROOT CANALS.—Dr. L. P. Bethel, Kent, Ohio, contributes an article in the *Ohio Dental Journal*, describing his methods of using nitrate of silver as a lining for root canals. The silver nitrate is placed in the pulp chamber and driven by cataphoresis into the tubuli; after which the nitric acid developed is neutralized by the use of dilute ammonia.

DR. FRANK C. PAGUE gave a clinic before the Stomatological Club of California, a report of which appears in the *Stomatological Gazette*. The roots of a first superior bicuspid were filled with salol and paraffine, equal parts by capillary attraction. A Donaldson broach was introduced into canal, and by means of the Evans' root canal dryer the salol and paraffine are flowed to the apex, following the broach to the most minute point. The broach is then withdrawn, and a gutta percha cone inserted.

"THERE are a few things," says Dr. F. A. Metcalf, in the *Pacific Stomatological Gazette*, "we have all noticed in our private practice." First, We are more cheerful in our work when we are sure of our cash, notwithstanding all charitable talk to the contrary. Second, That most people are willing to pay for not being hurt. Third, That the last tooth excavated was the most painful; that is also liable to be the case with the last extraction. Fourth, That some people are so full of suggestions to the operator that we wonder how they could have mistaken their calling. Fifth, How beautiful some people's teeth were (to hear them tell it) before they were lost. Sixth, That bills presented promptly are liable to be paid more cheerfully. Seventh, That people who speak of \$50 as a trifle are generally a little short and slow pay. Eighth, We have

all noticed with a big "A" that plates fit better after they have been paid for. Lastly, Most of us will admit that there are times when we are woefully deficient in backbone.

A NEW FILLING MATERIAL—The combination of silex, oxide of zinc and gutta percha, was found to be good to resist mastication, but the silex being so gritty the burnisher left a black mark on the surface of the filling. Many other combinations were tried but did not meet with satisfactory results until I tried the combination of

White gutta percha.....	8 parts.
Aluminum filings.....	5 parts.
Oxide of zinc	1 part.
Whiting	½ part.

This admixture I have been very much pleased with, and have named it "Aluminized gutta percha." It is easily manipulated, and holds its position in the cavity when firmly packed. I have not noticed any bulging, which is so common in the pink gutta percha.—*Dr. F. W. Bliss, in Pacific Stomatological Gazette.*

DR. J. F. FRIBLEY, in the *Dental Digest*, advises concerning taking impressions of lower cases where all teeth are out and the ridge hardly perceptible, the muscular attachment being so near together on the top of the ridge that there is hardly a line of space where the plate can rest undisturbed by the action of the muscles in the movements of the jaw in mastication. He uses plaster pretty thin, inserting the cup just as soon as it can be inverted without the plaster dropping out, requesting the patient to move the jaw as in the process of mastication, being careful to hold the cup firmly in place. This is kept up until the plaster is of a putty-like consistency. Then the jaw can come to rest, as there can be nothing gained by keeping up the movement. Upon removing the impression from the mouth there are to be seen small grooves, depressions and elevations which correspond exactly to the muscles, depressions and elevations of the ridge of the jaw, and when the plate is made it will fit perfectly and not be displaced during the process of mastication or in other movements of the jaw.

SAYS Dr. J. F. Crawford, in the *Cosmos*: I want to commend the recent developments in swaging metal plates over a plaster die; it can accomplish results that are perfectly marvellous. Nothing can approximate a lower plate of aluminum swaged over a plaster die, with rubber attachment. It goes in like a wafer, and there will be no ulcerative absorption in the lower jaw. If the teeth are imperfectly occluded the lower plate moves and slips about and

hits the mucous membrane here and there till the tissue becomes hypertrophied, and finally there remains only a soft bed for the plate to rest on. But there is less absorption under an aluminum plate swaged between two metal surfaces and driven home on a plaster die ; it fits so beautifully you can bring out the rugæ in an upper plate. You have all seen those soft mushy jaws where all the anterior part is like a second tongue ; but you will have no more of that if you will adopt the swaged aluminum. I earnestly recommend to you the process of swaging metal plates over the plaster die, and assure you you need not break the model.

WOODEN TOOTHPICKS.—Dr. H. R. Neeper writes the *Dental Digest*, condemning the use of cheap wooden toothpicks, such as are found in restaurants. He has had numerous cases presenting such symptoms that at first glance it appeared as if an abscess was forming, but, on close examination, found pieces of toothpick broken off in space. In other cases the constant use of toothpicks has caused the crowding away of the festoon of the gum, and the consequent exposure of the neck of the tooth to sensitiveness, heat, cold, touch, and also making it very liable to decay. His first treatment in this class of cases is to give the patient a lecture on the use and abuse of the toothpick. Then he thoroughly cleanses and removes all foreign matter, touching the sensitive points with carbolic acid. If a second treatment is necessary, he touches with nitrate of silver. The patient is directed to put a small pledget of cotton in the space before meals, and after eating to brush and rinse the teeth thoroughly, and then to remove the cotton and rinse again. As a rule, the annoyance ceases, and the gum fills the space in a few days.

SHOCK AND STRAIN RESULTING FROM DENTAL OPERATIONS.—Speaking of the disastrous results sometimes following the performance of severe dental operations upon delicate patients, the editor of the *Dental Record* says : "It is no rare thing to have patients refer to some past time when they were having their teeth put in order, as an experience they would never again repeat, and which had made them feel nervous and worn out for months. Inquiry usually elicits the fact that they had sat in the chair for hours consecutively, and had attended, day after day. Well may we ask, Is this a desired result ? Is there no simpler way, no less wearing method of treating the teeth of such delicate, highly strung patients ? Is it wise practice to attempt elaborate work, lasting for a few years, at the risk of letting the teeth be neglected for many years ? Has not the practitioner rather overlooked the fact that he is not dealing with an inanimate object, and that it is as important to read correctly the character and endurance of his patient as it is to aim at mechanical perfection."

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

TIC DOULOUREUX.—This complaint is often attributed to decayed teeth, and not infrequently these are extracted one after another without any improvement resulting, for the simple reason that the neuralgia is not dependent upon this cause at all.—Roberts' "Practice of Medicine," page 862.

LOCKJAW CAUSED BY A TOOTH.—An unusual case of lockjaw which persisted for four years and baffled the skill of several physicians is reported by Sachse, who upon examination found that the right upper wisdom tooth projected externally in a horizontal direction and so pressed against the internal pterygoid muscle that it was impossible for the patient to open his mouth. The removal of the tooth improved the condition at once, and in eight weeks the jaw could be opened normally.—*American Medical-Surgical Bulletin*.

JOHN W. TEALE, M.A.Oxon., F.R.C.S., in a presidential address entitled "A few practical hints to medical men on the preservation of their own health," *British Medical Journal*, December 19th, 1896, says, "No medical man should ever have a bad tooth in his head. He is courting disaster if he does so. To avoid this I would suggest that he be regularly inspected by his dentist before going for his holiday. It is a simple matter to brush the teeth after every meal, and by rinsing with cold water you get an early intimation of danger."

HEREDITY AND TOOTH EXTRACTION.—The question whether the extraction of teeth through many generations has an effect upon present-day teeth is one which is open to argument. On one side it may be said that a tooth is not part of an organ—like the tip of a finger—but is a separate organ produced in a special manner, and if that whole organ is destroyed through several generations it will have the effect of mortifying the type and affecting its integrity. On the other hand in comparing mutilations such as continuous docking of horses, dehorning of cattle, and circumcision, we find no appreciable difference in the type, though of course these are instances of removal of a part, not the whole. But, as Sir James Crichton Browne once remarked, when nature removes an organ it is because that organ is no longer wanted, and the removal takes place by a kindly gradual suppression, not by a foul and painful disease like dental caries or pyorrhœa alveolaris.—*British Journal of Dental Science*.

THE *British Medical Journal*, December 12th, 1896, referring to the erection of the new Dental Hospital of London, says, "Of the usefulness of the charity it can hardly be necessary to say much. Toothache is one of those minor curses of civilized humanity which makes all the world akin, but we may say that it would be difficult to exaggerate the importance of good dentistry for the poorer classes, among whom, and especially among the women, much ill health is to be traced to deranged digestion consequent on imperfect mastication due to bad teeth."

RELATION OF TUBERCULOUS GLANDS IN THE NECK TO DENTAL CARIES.—Dr. Starck, from observations upon 113 children, has established a distinct relationship between lymphadenoma and dental caries in forty-one per cent. of cases. In two cases he succeeded in discovering the presence of tubercle bacillus in the tissues situated between the roots of a molar in direct contact with diseased glands. He considers it most important in treating these cases to extract all carious teeth, and in every way to place the oral cavity in a perfectly healthy condition.—*British Journal of Dental Science*.

S. L. GOLDSMITH, *International Dental Journal*, January, 1897, reports a case of calculus in sublingual gland. The patient, a young woman aged about twenty-one years, complained of pain in right lower central incisor. This tooth did not respond to application of methyl chloride. Pulp in a dying condition. Abscess of right sublingual gland pointing towards median line. The abscess was incised and pus evacuated but nothing could be discovered in the gland by probing. The wound was packed with guage which on being removed that evening revealed a calculus the size of a cherry pit. The next morning another smaller calculus was removed. "Now the question which arises is, was the fact that the gland abscess and the pulpitis took place about the same time (as in my opinion) merely a coincidence, or did the suppuration ensue in consequence of the invasion of micrococci from the tooth? Dr. Cohn held the opinion that while of course the calculi must have been present for a long time, there would have been no pus formation until the infection took place."

CHARLES E. SOLOMON, Liverpool, mentions an instance of recovery from chloroform syncope in *British Medical Journal*, January 2nd, 1897. He administered chloroform to a young man aged twenty years for the extraction of teeth. Four days previously he had examined him and pronounced him in a fit condition to take the anæsthetic. It was administered on lint, the patient being in a recumbent position. After about 2½ drachms were given breathing became spasmodic, deathly leaden pallor

appeared with profound dilatation and fixity of pupils and feeble attempts at respiration which was jerky. Simultaneous arrest of pulse. Chloroform was stopped and he was lifted to the floor, artificial respiration and subcutaneous injection of ether in xxx. Breathing improved in four minutes, pulse became perceptible, color returned to face. There was a disposition to relapse so artificial respiration was kept up. Consciousness returned. Brandy was given. Patient was kept in recumbent position for ten or fifteen minutes, when he was lifted to the chair. This was a case of cardiac failure due to the chloroform, and Mr. Solomon holds that the recovery was due to the prompt and unceasing efforts used for the restoration of the circulation.

Reviews.

Artificial Anæsthesia.—A manual of anæsthetic agents and their employment in the treatment of disease. By LAURENCE TURNBULL, M.D., Ph.G. Fourth edition, revised and enlarged. Illustrated. Pp. 550. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street.

It is a happy coincidence that the fourth edition of this comprehensive work should be issued on the fiftieth anniversary of the discovery and introduction of ether. The author very justly pins his faith to ether as the most available and the most free from danger of all known anæsthetics. Part 1 is devoted to the history of anæsthetics; Part 2 to a very complete resume of nitrous oxide, of special value to dentists; Part 3 to alcohol, ether, chloroform, and various mixtures; Parts 5 and 6 to local anæsthetics; Part 7 gives very full and valuable advice as to modes of administration, precautions, etc. The work is unquestionably of great scientific, historical and practical value, embracing the very latest investigations in the most recently recommended anæsthetics. The dental fools who rush in with the use of dangerous anæsthetics where the most scientific experts are cautious, do not, as a rule, read or profit by such works as this one under review. But to the wise practitioner and the student preparing for his examination, the practical value of this work is very great. In our last issue Dr. Klotz referred to the use of eucaïne in dentistry. The author quotes a number of authorities in its favor.

Dominion Dental Journal

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VOL. IX.

FEBRUARY, 1897.

NO. 2.

UNCONSCIOUS MISCHIEF.

It is one of the mortifying conditions of professional life, that even men who are mindful of the amenities, and with whom ethical men have no quarrel, sometimes voluntarily isolate themselves so much from their brethren, that quite unconsciously they aid and abet the quacks, and those who resort to quack methods. We have frequently drawn attention to the fact, that men who want to do mischief, the iconoclasts of educational and legislative reform, show great zeal in their unity. Birds of a feather flock together, and the quacks, and those who use quack methods, have so much in common, that they become, like Juno's swans, "coupled and inseparable." It is, of course, easy to imagine why the energy of those who do mischief should succeed, in face of the divided and feeble efforts of those who do well. There is no evading this fact; and it should have its influence in moving gentlemen who have heretofore shown indifference, to co-operate, with the efforts of those who are doing their best to make things better.

However, selfishness is ingrained in the most of us; some of it contemptible, some of it perfectly just. The question occurs as to the distinction between these two forms of one of the common characteristics of humanity. Somebody has to put a shoulder to the wheel in any effort for reform. Somebody has to make sacrifices and endure suspicion, criticism and abuse. Nobody

would have the temerity to declare that anybody could steer through hidden and sometimes treacherous obstacles without a disaster ; yet, it must be conceded, that, taking it for all in all, the dental reform movement in Canada has been exceptionally successful. If we have had failures, to whom are they due? Quite as much to the timid as to the traitor. If we have had remarkable successes, to whom are they due? Surely not to the critics, whose selfishness was concentrated in their own personal gain ; but to men who made personal and professional sacrifices, who cut off even social enjoyments and necessary relaxation, that they might serve their brethren. Gentlemen who seek office and notoriety, and who use it for their own commercial profit, and who are even willing to expose their unfitness before their confreres for the collateral advantage the notoriety may give them before the public, are happily few and far between. But as a general rule, it is these very parties who have grievances, and who are envious of the honors of office which fall to faithful and competent workers. Put them into the positions for which they hunger, and they make themselves ridiculous, unless they have the rare faculty of evading discussion, or the tactful trick of silence.

In Ontario and Quebec the profession has had difficulties to meet of the most provoking and unreasonable character. The disturbers of peace and prosperity, without a single exception, have been distinguished for pure and unadulterated selfishness of the meanest sort. They have never co-operated with the disinterested labors of others, but they have displayed jealousy, and occasionally knavery, in their bitterness. They have not the manliness to accuse or attack to their faces those whom they dislike. If they have not the imprudence to slander them to their patients, and as discreetly as they can to their confreres, their very cunning, like curses and chickens, "comes home to roost," and they are forced to swallow their own spleen. It is a miserable spirit to carry about in one's life. The men who have labored for the profession do not care two figs for the friendship of the tag-rag and bob-tail riff-raff, but they have a right to expect at least some magnanimity, if not actual help, from those who are not included in this category. Many of our best men have no love for office. Circumstances of poor health, natural preference for privacy ; perhaps the wiser idea, even if a bit mercenary, that to take care of number one is more profitable than caring for all the rest of creation ; these influence them to avoid official responsibility. As a matter of justice, they should remember that the men who labor in office enable them to care more for their own interests, by doing duties which are just as incumbent upon the retiring, as upon those who pull the oars. If they do nothing, in face of those who are always aiming to undo what has been done, they might almost as well do mischief openly.

DENTISTS WHO BREAK THE SABBATH.

We have no sort of sympathy with inconsistent Christians who on Sunday drive to church in their carriages, yet who want to deprive poorer people of the privilege of the street-cars. The selfish clerical hypocrites, who want to dictate to the Almighty by what denominational door sinners are to be admitted to salvation, and who, while demanding the strict observance of the Sabbath from their parishioners, are having their servants busy in the kitchen, cooking for them the hottest and heaviest dinner of the seven days, are object lessons for all honest men to avoid.

In these days of keen competition, more than the quacks are resorting to the custom of working at night, and on the Sabbath. The former, as a rule is not always just to the patient, and is injurious to the eyes of the practitioner, and is a "penny-wise, pound-foolish" policy. The practice on Sunday cannot always be avoided. It is our duty, on any day, and at all hours, to relieve pain, but it is not incumbent on the dentist, like the physician, to subject himself to professional visits on the Sabbath from the class of people who have no respect for the sacredness of the day, and who would sooner play poker on Sunday than go to church. The several grades of Sabbath-breakers have each their excuse; but there is none for the regular practice of dentistry on that day. Such practice is the thin end of the wedge, which opens a temptation to positive immorality. If busy practitioners of dentistry know so much more of theology than educated professors of theology, and if they have, out of their ignorance or conceit, constructed a present code of morals, and a future life for themselves, which contemns the Ten Commandments, they would, at least, be healthier and happier to make the Sabbath really a day of rest, whether in the open air or the quietude of their own homes.

AN OFFICIAL COUNTERBLAST.

It would not be half such hard work to "educate the public" in Canada about quack dentists and quack methods, if every dentist who is anxious for that reformation, would do the share that justly lies at his own door and in his own office. It has been said that the exposures made by this journal do not reach the public; that no one but the dentists read and know the facts as to the lying and imposture of the quack advertisers. It is something gained to know, that at least quite a number of young men have been dissuaded from using quack methods by what has been written in the JOURNAL. But whose fault is it if the public do not read and

know that such advertisers as disgrace the papers in Toronto and Montreal are frauds, and in some cases knaves? It is easier for our subscribers than for us to convey these facts in a proper way through their local press and to medical men. But we reiterate our belief that the most effective method is official standing advertisements in the press, giving succinct facts. To avoid invidious suspicion that these advertisements would be used for the personal advantage of officials, they should be made purely official and impersonal.

A COMPLIMENT TO THE QUEBEC LEGISLATURE.

It was a very suggestive "compliment" that one of our Quebec dentists recently paid to the Local Legislature. "You get any law for any ting, if you like spen' de monie. *Je connais*, me smash dental bill joost same, but me not want cut me troat, me joost want have assistant so can drive me horse, and see de gal, and play de poker, and de assistant he do de work in office. Me no 'fraid; me go Quebec, *bien*, many member dey poor, like devil, and you buy dem joost you like; some you geeve diner, and de champagne and de cagar, and some you joost say 'Me' fren', me no make bribe, you too honorable man for dat, but me ax you geeve time like beeseness for me amendment, and you joost put dis in your *poche*, "beeseness is beeseness," and if you get me bill tru, me pay you well. Not de bribe, you know, Oh! non, you too honorable man for dat; me too. But me ax you geeve more time for me, and, of course, me no ax you work like dat only for de pay you get as member.' *Bien*, me go Quebec; me send bottles wine and de cagar, mon compliments, to de members in dere room private; me leeve *ma carte*, me *engage* de lawyer for talk, talk, talk, me all right. Many de member dey no pranceeple; dey vote to-morrow for what dey condemn to-day eef it pay dem. You tink dat de way to get bill is be honest, and tell de trut? Non! De bank bill more strong argument. Dat is de ting to get what you want in Quebec. You no dare geeve dat to man like Dr. Marcil or Mr. Stephen, or oder man like dat. Dey smash your face eef you ax dem do ting like dat. But you find some beeg men, you surprise, dey take de bribe on de sly. But you no call dat 'bribe,' you call dat 'beeseness.' I know man, he one time was beeg man in de Assemble and he go committee, and he rage and he talk de nonsense for me, for I joost ax him he work for me, I pay him *like lawyer* in hees office, *not like member* in de parliamen. Mon Dieu! he make meeself laugh de way he joomp around for dat pay. You tink dat he gran' man of pranceeple? I get me bill, he get his money. He tink me fool. I know he rascal."

TWO GOOD BOOKS.

In the two last issues we reviewed two splendid works which every student and practitioner should buy. We refer to the "American Text Book of Prosthetic Dentistry," edited by Dr. Chas. J. Essig, and published by Lea Brothers, of Philadelphia and New York. The other work is the fourth edition of Dr. Clifford Mitchell's "Dental Chemistry and Metallurgy," published by the W. T. Keener Co., 96 Washington Street, Chicago. They are both invaluable.

EDITORIAL NOTES.

DENTISTS who resort to quack-methods should breed ducks. When the ducks met their owners, their language would, however be somewhat too personal.

THE many friends of Dr. J. Ed. Line, of Rochester, N.Y., editor of the *Otontographic Journal*, will sympathize with him in the loss he has sustained, by the death of his wife, which occurred last month.

DR. CARL HEITZMAN died in Rome, Italy, last December, from hypertrophy of the heart. Dr. G. Alden Mills, one of his former pupils, gives a very interesting sketch of the doctor's career, in the January *Digest*.

A QUACK would rather be reviled by his colleagues than respected. He is more ashamed of a crease in his pants than a crook in his character. He will blush for a misfitting coat, and brave proof of his rascality.

MEN who use quack-methods do not do anything that the very poorest man in the profession cannot do. Anyone can boast and lie. It does not hurt the quack to see that in the meanest sort of quack advertising he is permitted a monopoly. He can bear the contempt of the wise, if he gets the money of the fool.

DO not lose the advertisements. Some dentists have them bound with the reading matter. Several have them bound separately. Dr. Beacock gave us the simple idea of fastening them together with wire nails. It is interesting and suggestive to compare the advertisements of to-day with those of ten or twenty years ago.

DR. WELCH, of the *Monthly*, puts the busy profession to great strain in expecting its members to worry themselves over his spelling fad. It is not likely that he will revolutionize the orthography of the English language. When he reforms his fad, and stops this nonsense, we will begin to read his journal ; but not until then. It is about as vile as bad oysters.

THE injury the departmental stores have done to legitimate business in Toronto and Montreal, illustrates the damage that can be done to legitimate practice by boasting and falsified advertising. But while the former method of doing business can be made to pay, and can even be conducted honestly, that of the "cheap" advertising dentist cannot be made to pay in the long run, and cannot possibly be conducted without deliberate fraud, falsehood and quackery. Our duty and interest is to make this apparent to the public.

IF public opinion once turns towards the classification of dentistry as a trade, rather than as a profession, all the legislation in the Provinces, and all the ethics of our Associations, will not easily turn it back. The gutter-dentists can be excused for their deliberate self-abasement ; you may put a golden dish of summer fruit before a hog, but it will pass it by for the dirty trough of rotten corn ; but do respectable practitioners see no better way to deal with public ignorance and professional baseness, than by imitation of the conduct they condemn ?

IN the *Educational Review* (St. John, N.B.) we find a selection from the *Western Teacher* (U.S.), which goes to show that the proposal to introduce instruction to the pupils, about the care and value of the teeth, might be extended to the teachers. The pupils were instructed to copy sentences, "filling blanks properly" :

1. A ——— builds houses.
2. A ——— cultivates soil.
3. A ——— cures diseases.
4. A ——— doctors horses.
5. An ——— treats diseases.
6. A ——— extracts teeth !

This is bad enough for the intelligence of the Quebec Legislature.

Dominion Dental Journal

VOL. IX.

TORONTO, MARCH, 1897.

No. 3.

Original Communications

FERMENTATION IN THE MOUTH CAVITY AND ITS BEARING ON DENTAL CARIES.*

By PROF. J. J. MCKENZIE, Toronto, Ont.

By the term fermentation we understand usually, that decomposition of organic matter of a carbohydrate character, due to the action of micro-organisms, which results in a series of simple chemical compounds. The term fermentation is thus restricted to this decomposition of carbohydrates, whilst the similar decomposition which occurs in proteid and albuminous material we call putrefaction. There is really no reason why these two terms should be given to two processes which are essentially similar; but the terms have come to us as a legacy from the days when the processes were not understood. The decomposition of carbohydrates is frequently associated with the active evolution of carbondioxide gas, and from the bubbling and boiling of the fermenting mass due to this evolution of gas the term arose. At first, of course, fermentation and putrefaction were supposed to be due in some way to the chemical action of the air, as the results of the decomposition were found to contain a greater percentage of oxygen than the bodies decomposed—*i.e.*, that the process was one of oxidation. It took some time before these ideas were overthrown, but finally, due chiefly to the labors and experiments of Pasteur, it was shown that the decomposition was due to the presence of minute plants, either yeast or bacteria, and that without

*Read at the eighth annual meeting of the Ontario Dental Society, Toronto 1896.

the action of these organisms no fermentation or putrefaction could take place.

The fermentation of carbohydrates due to the action of yeast does not concern us specially this evening. The resulting products of yeast fermentation are chiefly carbondioxide and alcohol, with traces of other bodies ; but this is not the fermentation which ordinarily occurs in the mouth cavity, and it is that which we have specially to consider. This fermentation in the mouth is chiefly due to the action of bacteria.

Bacterial fermentation of carbohydrates varies very considerably in its character, according to the carbohydrate which is fermented or decomposed, and the organism which is causing the decomposition.

Most of the carbohydrates must undergo change before they can be fermented. Starch, for instance, must be converted into glucose, cane sugar inverted, cellulose changed in some way, before decomposition can take place. This change is brought about by the so-called unorganized ferments or enzymes which are secreted either by animal cells or by the bacteria themselves. That is, the process is begun by a simplification of the carbohydrate before ever any decomposition takes place. The nature of this simplification is one of the obscure points in physiological chemistry about which we have many theories, but no one of them satisfactory. The extent to which this simplification takes place frequently determines the results of the fermentation.

I have here two tubes containing beef broth infected with the same organism. The one contains a certain amount of glucose, a simple sugar ; the other, the same amount of lactose. You will perceive that the tube containing glucose has undergone more rapid fermentation than the one containing lactose. This is shown by the amount of gas in the closed arm of the tube, which, being a product of the fermentation, is an indication of the extent to which it has taken place. This particular bacillus is more capable of decomposing glucose than lactose. Similarly, if a material contains starch, many bacteria might go on living in it indefinitely without touching the starch ; but as soon as we introduce a little saliva, which contains the enzyme ptyalin, immediately fermentation begins, as the ptyalin converts the starch into glucose, a carbohydrate which these bacteria can use.

The chemical nature of the carbohydrate has a very curious bearing upon the whole question of fermentation, as it has been but recently discovered that only those sugars with three, six, nine, or some multiple of three atoms of carbon in the molecule can undergo fermentation. This is something which we do not as yet understand, but indeed the whole question of the chemistry of the carbohydrates is still in its infancy.

The character of the micro-organism causing the fermentation also plays an important part in the products of fermentation. This at one time was thought to be of so specific a character that certain bacteria were named according to these products, *e.g.*, *bacillus acidilactici*, *bacillus butyricus*, etc., but we now know that in the case of the production of lactic acid, for instance, quite a number of different micro-organisms may cause it.

As a rule, we may state that where carbohydrates are decomposed by bacteria, one of the most important products is an acid. I do not mean by this that only one acid is formed, as a whole series of acids may be produced during the fermentation, but usually one predominates so as to give character to the process.

When we examine these acids produced, we find that they all belong to that group which we call organic acids, and if we study them we find that perhaps the three commonest are lactic, acetic and butyric acid. Formic and propionic acid may perhaps be added; other organic acids also occur, but in extremely small quantities.

Mineral acids are not found as a result of the fermentation of carbohydrates; in fact, the only mineral acid which we know of as a result of bacterial activity at all is nitric acid, which is the result of the so-called nitrifying organisms, and this formation of nitric acid only takes place under those very special conditions in the soil which results in the process of nitrification. No trace of nitric acid has been found as a result of the processes which we ordinarily understand as fermentation or putrefaction.

These organic acids which are produced during carbohydrate fermentation are naturally not as strong as the mineral acids, but yet they have the same character that mineral acids have of entering into combination with other elements to form salts. They are therefore capable of acting upon such a substance as carbonate of lime and by combining with the lime to dissolve it.

Ordinarily the process of fermentation is self-limited, just as in the yeast fermentation of sugar. When a certain percentage of alcohol is reached the process stops owing to the injurious effect of the alcohol upon the yeast; so in the lactic acid fermentation, when a certain percentage of acid is reached the fermentation ceases and the micro-organism may even be killed by the lactic acid which has been formed.

But if we add something to the fermenting mass which will combine with the lactic acid as it is formed, such a substance, for instance, as carbonate of lime, we may have the process continue as long as the fermentable substance (sugar) holds out, or until all the lime has combined with the acid. If we watch this process in a test-tube we find that the calcium carbonate gradually disappears, that it is dissolved by the acid set free during the fermentation.

Now, if we apply these facts in regard to the bacterial fermentation of carbohydrates to the changes which take place in the mouth cavity, we see at once that these may have a very important bearing upon dental caries. For if we should have there a fermentable carbohydrate and a bacillus which can cause it to ferment, we must necessarily have the production of a free organic acid, and if there is present a lime salt with which this organic acid may combine, we must expect a solution of this lime salt by the acid and a continuation of the process.

Quite a large percentage of the food material which enters the mouth consists of starch; this starch is acted upon by the enzyme of the saliva ptyalin and converted into glucose, and we have our fermentable sugar.

The question now arises, have we present these micro-organisms, which may cause fermentation with the production of acid. This can only be answered experimentally. I have in these flasks small quantities of a mixture of bread and water which have been colored blue by litmus solution and sterilized; as long as they remain uninfected they will remain unchanged, but certain of them I have infected with a small quantity of my own saliva, and have placed in an oven kept at blood heat. These, you see, have become bright red, showing that fermentation has taken place and an acid has been produced. I may say that I have frequently seen this change take place within five hours after the infection of the mixture. This shows very plainly that there are in ordinary saliva organisms, which may cause the fermentation of carbohydrates with the production of acid. But this can be shown more conclusively in other ways, viz., by bacteriological methods. We may isolate the different species of bacteria which are present in the mouth cavity and study their relationship to the fermentation of carbohydrates. My own researches along this line have not been very extensive, but I have found no difficulty in isolating bacteria which can cause fermentation of carbohydrates.

Miller, to whom we owe most of our knowledge upon the subject of the bacteriology of dental caries, found at one time of twenty-two different kinds of bacteria isolated from the mouth cavity, sixteen which caused an acid fermentation of sugar. At another time, out of twenty-five, sixteen were acid producers. Other observers have confirmed his results, and apparently a larger percentage of the mouth bacteria are acid producers than those of the stomach or intestines.

As to the acids which are produced by mouth bacteria, the greater majority produce lactic acid, a few acetic and a few butyric, whilst other acids are produced in smaller quantities.

The highest percentage of free acid which Miller found at any time was 0.75, and it is probable that this is about the limit of concentration.

Acetic acid is possibly a commoner result of the fermentation in the mouth than Miller would admit, but there is no doubt that lactic acid is the most common. In one experiment of my own with mixed culture in bread solution, the odor of acetic acid in the mixture was most marked.

There can be no question then as to the presence of free organic acids in the mouth cavity as the result of the fermentation of carbohydrate food, and if we have a lime salt freely exposed to these acids we must have a solution of that lime salt by the acids formed. Now, in the teeth themselves we have a lime salt (chiefly phosphate with a little carbonate) which must necessarily be acted upon if exposed for any length of time to the acids.

There are several objections which might be raised to the possible solution of the calcium salts of teeth by organic acids. One very important one is, if, as is evident, fermentation in the mouth cavity usually gives rise to organic acids, why are the teeth able to resist at all?

There are several conditions which explain this. First of all, for the formation of acids a certain amount of time is required; consequently, it is only where carbohydrates become lodged between teeth or in imperfections of the calcification that the fermenting mass remains long enough to produce sufficient free acid to cause decalcification. Secondly, the normal reaction of the saliva is alkaline, and this must necessarily neutralize a certain amount of the acid formed. Thirdly, in that form of fermentation to which we have given the name of putrefaction, *i.e.*, the decomposition of proteid material, we frequently find free alkali produced instead of free acid, and in a mixture of food material lodged between teeth or in a cavity the carbohydrates will need to be in excess of the proteid before we can be certain that free acid would be produced. All these factors, of course, have a retarding effect upon the process of decalcification.

It may be objected by some that the acids produced during fermentation are not sufficiently active to cause solution of such a substance as the enamel. This is very readily answered by allowing a solution of lactic acid to act for some time upon calcium phosphate, calcium carbonate or on powdered enamel. It will be found that although the solution does not occur with the rapidity that it would if a strong mineral acid were used, still it is possible very soon to show by the ordinary qualitative tests that lime has been dissolved. I have here two flasks, one of which contained calcium carbonate in addition to the mass of fermenting bread, and it will be very easy to show that in the one in which the carbonate of lime was present a certain amount of it has been dissolved.

I think I have made it clear that in the fermentation of carbohydrates in the mouth cavity we have a sufficient explanation of

the first stage of dental caries, viz., the decalcification of the enamel and the dentine, and I believe that in this stage we have by far the most important one in the whole process.

There is apparently during the process of decalcification a distinct reaction on the part of the dentine, or rather on the part of the fibrils of the odontoblasts. This is shown by the formation of a more transparent, more homogeneous and apparently more resistant layer of dentine just beyond the area of decalcification, but once decalcification takes place all resistance as far as the dentine itself is concerned ceases, and it behaves like any other dead proteid material in undergoing dissolution more or less rapid, depending upon the bacteria which have infected it. Decalcification having taken place, the destruction of the proteid part of the dentine must necessarily follow.

It will be seen then from this that the all important factor in dental caries is the fermentation of carbohydrates in the mouth, and in lessening that fermentation and preventing the products of fermentation from acting upon the teeth we have the all important factor in the prophylaxis of dental caries.

COMBINATION FILLINGS.*

By DR. MOYER, Galt, Ont.

Yes, I believe in combination fillings, where they can be properly used, where there is room or sufficient depth of cavity for such a filling.

Combinations with gold are: Cohesive foil with non-cohesive gold foil, 1 to 2, the non-cohesive folded within the cohesive. Utility: Thermal changes not so severe, packs more readily, makes a solidier filling, with stronger and better margins than either form alone.

Gold with Tin.—The only filling that may probably exclude bacteria. Use indicated in deep cavities in posterior teeth, where the dentine is of low grade. If gold alone be used the tooth may not be preserved. Tin, being softer, is more easily adapted to the walls of the cavity, especially at the cervical margin. Gold may then be added, or gold and tin in alternate layers. Utility: Better adaptation, and moisture in soft dentine oxidizes the metal and the stannic oxide fills the tubuli, and covers the surface of the dentine with an insoluble lining, and decay is impossible; more economical.

*Read at eighth annual meeting of Ontario Dental Society, Toronto, Ont., 1896.

Gold with Amalgam.—One of the very best for large cavities in teeth of ordinary structure, especially where cavities go far below the gum. The visible part of filling gold, the rest amalgam. If filled at one sitting, use matrix and press first few layers of gold with kid strip. If two sittings, first sitting, add amalgam; second, drill retaining pits in amalgam and thus anchor gold. Two sittings are needed for incisors. Utility: Better adaptation, dentine does not give way as in the use of each separately, saves time for both patient and operator, and is more economical and more permanent.

Gold with Oxyphosphate, or Oxychloride.—The acme filling for large crown cavities in such positions as may be properly reached by the operator. Press the foil into the soft cement for anchorage, or let cement harden, and drill pits or grooves into it for anchorage. Utility: Perfect adaptation, in better harmony with tooth structure than gold, economizes time, patience, tooth substance and gold, prevents thermal changes from causing injury to pulp.

Amalgam with Cement.—The most nearly perfect filling for deep cavities in posterior teeth where patient will not pay for gold or where cavity is difficult of access. Use as much cement as possible without covering margins of cavity, leaving sufficient anchorage for amalgam covering. Utility: Perfect adaptation, little or no effect from thermal changes; cement adheres to walls of cavity and retains filling with least amount of undercut; economy and comfort to patient; less amalgam used, therefore, less change of form.

Cement with Gutta Percha.—Where cavities extend under the gum margin, cover the bottom of the cavity and the cervical margin with gutta percha and prevent the possibility of a space being formed between the filling and the tooth, so frequently found when cement is used alone, owing to the disintegration of the cement at that point.

THE DENTAL PRECEPTOR.*

By R. E. SPARKS, M.D., D.D.S., L.D.S., Kingston, Ont.

At this time, upon the occasion of the opening of the new building of the Royal College of Dental Surgeons, it would seem opportune to read a paper upon any subject pertaining to education. Particularly is this the case if pertaining to dental education.

The dental student is discussed at the convention and in the journals, and forms an interesting subject. What shall we do with

* Read at eighth annual meeting of Ontario Dental Society, Toronto, 1896.

him is an important question at the present time. His numbers are becoming formidable and are viewed with alarm by the pessimistic practitioner, as he sees his practice jeopardized by the wholesale manufacture of new dentists out of all proportion to the increase of population. He sees the profession degraded to the level of a trade, by the competition which numbers afford.

I was recently in receipt of an anonymous letter, asking me to take advantage of my position as an examiner to prevent the graduation of so many candidates. I have heard that even the new Dental College building is viewed with suspicion by some, as being an additional attraction for young men to enter the dental profession in Ontario. Others claim that the better educated the man the better the interests affected by him, and welcome every facility for advancing that education. But it is argued we have had a School of Dentistry in Ontario for over twenty years, and yet we have among those graduates some of the most magnificent quacks that ever disgraced a profession. That does not prove that the state of affairs might not have been much worse had not the school and legal regulation of the profession existed. Who among us would favor abandoning the School of Dentistry and repealing the laws regulating the requirements for practising our profession?

There are three classes of men—those who are gentlemen in spite of conditions and environment; those who are not naturally gentlemen, but who may be made so by education and surroundings, and those who could not be gentlemen under any circumstances. A few of the latter get into all the professions—not more into dentistry than into the others.

As the students of to-day will be the preceptors of a few years hence, it is desirable that as few as possible of this class shall gain entrance into the ranks of dental students. Public safety demands that the man who presumes to operate upon the human body, shall have a knowledge of the part he undertakes to operate upon. How he shall best acquire that knowledge is a matter of vital importance to man himself and the public at large. It may be done by private tuition, by college education, or by both. The great desire to enter the professions has made a great demand for colleges where the professions may be taught. The dental profession has kept well apace with the others in numbers of candidates. So great has been the demand for dental colleges in the Republic to the south of us, that many charters have been obtained by private individuals as investments for capital. To such an extent has this prevailed that few large cities have no dental college, and many have two or three each. As the dividends upon the capital invested in those institutions depend upon the number of students attending, there is a danger of the interests of

the public being sacrificed to those of the colleges. With us in Ontario the law requires that the candidate for graduation in dentistry shall, in addition to attendance at college for three sessions, be articulated to a practitioner for a term of three and a half years including the time spent at college. This we consider an advantage over all private tuition or all college instruction.

Few men who are engaged in practice, having the cares of an office, and especially if to that be added the cares of a family, can keep themselves sufficiently posted upon what we usually term the theoretical subjects, as chemistry, physiology, anatomy, *materia medica*, etc., with their changes by development and discovery, to thoroughly instruct a student upon these subjects. And supposing they were capable, how many could take the time to instruct one student upon the many subjects necessary for a thorough dental education? This can better be done by congregating students, and dividing subjects to be taught among a number of men, who may be paid to devote sufficient time to keep themselves acquainted with all new discoveries and developments in connection with their subjects, and to impart a knowledge of those subjects to their classes.

On the other hand, there is much in a dental education which can better be taught in a private office than in a college. A dental student recently stated in my hearing that he regarded one year in an office better than five years at college. This may be an exaggerated statement, but there is no doubt but in a well regulated office there is much that may be learned of private practice which it is impossible to teach in a crowded college. However, leaving this argument out of the question, the fact remains, that in order to enter the ranks of our profession in Ontario the candidate must pass through the hands of a preceptor, and it is with this individual that this paper is calculated to deal.

No practitioner is under obligation to take a student into his office, and many refuse to do so, for various reasons. Some consider that after taking the college sessions out of the term of pupilage, the balance of time, even though a tuition fee be charged, is not sufficient to warrant his turning out a possible competitor. Others shrink from assuming the responsibility of allowing a student to operate upon their patients.

I recently read a discussion which took place at a dental convention upon the subject of education. One gentleman stated he would not take a student into his office for \$1,000.

There are three classes of practitioners who should never assume the responsibilities of a preceptor: Those who have no work for students to do, those who have work but will not allow students to do it, and those who allow students to operate indiscriminately. The two former classes do not do justice to their students, and the latter does an injustice to the public.

The first named takes a student to avoid having to do the dirty work of the laboratory, or for the tuition fee which he charges. The student, after graduating from such an office, has learned little more of practical work than how to boil and finish up rubber plates. We find men of this class trafficking in students. They charge a tuition fee. After a year or so the student asks to be released, as he is not getting the class of work which he knows he should get to do. The release is readily granted when the preceptor is in a position to accept another student. The student starts out to seek a situation upon salary for the balance of the term. Cases of this kind have come under the writer's notice.

The second class has plenty of work, both mechanical and operative. The student is taught to do the mechanical work and may be brought into the operating room to see operations performed in the mouth, or he may take his personal friends into the extracting chair and operate upon them, but to allow him to operate upon his preceptor's patients and possibly warm himself into their good graces, is out of the question.

I once called upon a practitioner and found his student in the laboratory taking an impression of his own mouth. This he said he was doing for practice, that his experience had been very limited and he did not wish to appear to disadvantage at college, where he was about to attend his last session. He was completing his fourth year's pupilage when the law only required two years, and yet he had not been allowed to perform the simple operation of taking impressions. His preceptor told me his patients would not allow a student to work for them. Another, who regularly kept a student and who also charged a tuition fee, told me he wanted no man to work for his patients but himself.

The practitioner who undertakes the education of a dental student assumes a grave responsibility; first, in regard to the student himself; secondly, to the profession; and thirdly, to the public. When a young man enters upon his life work it is of vital importance to him that he selects the calling for which he is best suited.

Perhaps no calling requires a more varied combination of qualities to insure success than does dentistry. The preceptor should recognize this, and take every precaution to ascertain whether or not the applicant for articles possesses sufficient of those to make him ordinarily successful. Should he find him lacking in any of the principal qualities which combine to make a successful dentist, he should point it out and advise him to adopt a calling for which he may be better adapted. This cannot always be ascertained until a young man has been some time in the office. It is, therefore a good plan to have an applicant, to whom there is no known objection, spend a few weeks or months in the office and laboratory before signing articles.

No preceptor should accept, as a student, one who lacks the principles of a gentleman, and it is a serious matter when a student has a preceptor who is lacking in this direction.

As we said before, some cannot be spoiled by environment, but more are influenced by surroundings. What then can be expected of the student who graduates from an office where all professional etiquette is disregarded, and every principle of the golden rule violated ; where the public are informed by flaming advertisements that they can be better served than elsewhere, or that they can be as well served at greatly reduced fees, and then are imposed upon, either by trickery or incompetency ; who also slanders and misrepresents his confreres to his patients ?

The ideal preceptor selects only a student who manifests a desire for an education, and has natural mechanical ability, and who is of good moral character. He teaches him neatness by keeping himself, his office and laboratory neat and clean. He has a place for everything and keeps everything in its place. His office library is supplied with books of reference. He takes a number of up-to-date dental journals that he and his student may see the latest methods and appliances pertaining to their profession. He attends the Dental Society meetings to become broadened and improved by contact and interchange of ideas with his professional equals. In his operations he is thorough and conscientious, gentle, but firm, upholding the dignity of his profession at all times. He lays out for his student a course of reading upon practical dentistry. When working in the laboratory he has his student at his elbow, and explains each step in the work he may be doing. He gives him some lessons in operative technique, and, as soon as he can appreciate it, brings him to the chair when operating for some one who may not object to the presence of a third party, and explains what is being done and why.

As soon as the student, by reading and demonstration, understands the principles of filling and extracting teeth, his preceptor allows him to commence operating upon the living subject, very simple operations at first, and increasing in difficulty as he advances in experience. His preceptor examines the operation at various stages, pointing out any decomposed tooth structure which may have been overlooked, walls too frail to be left with safety, extra retention necessary, etc. If gold filling be inserted, he sees that the retention points are being well filled, cervical wall well protected ; that the gold be well condensed around the enamel margin ; that overlapping material be removed in finishing, etc. But, says one, what busy practitioner can afford to devote as much time as that to a student ? He might better do the work himself. The busier he may be the better it will pay to take time and pains to give this personal instruction and demonstration.

As the student progresses from one grade of work to another, his interest increases until, when he sees his first contour gold-filling, or his first piece of bridge-work successfully inserted, his interest has arisen to enthusiasm. It is plain that the more attention is given to the student's instruction the sooner he will be competent to undertake all classes of operations, and the sooner he can do this the more assistance he will be to his preceptor during his term of pupilage. To the argument that the time spent in the office is not sufficient to pay for loss of time, waste of material, injury to reputation, loss of practice from competition, etc., and these are all arguments which have weight, I would reply, insist upon a reasonable tuition fee before undertaking the preceptorship, or, what is better for both preceptor and student, have a private agreement for a longer term of pupilage, together with a bond not to enter upon practice in the same locality for a reasonable time after graduating. This will enable the preceptor to give his student the time and attention I have mentioned without pecuniary loss. The student's physical condition should not be overlooked. If he be of a studious temperament, and become deeply interested in his studies, there is a danger of his neglecting to take sufficient exercise to develop and keep in tone his physical nature. He will thereby contract ailments which many dentists suffer from as a result of a too sedentary life. He should be given a little time for lawn-tennis and other out-door exercise, and his attendance at a gymnasium recommended. In addition, his preceptor should have a fatherly oversight over his social life; particularly is this the case if the young man be removed from the influence and restraint of home. He should see that he be introduced into respectable society, such as would be elevating socially and religiously; for, after all, his life is not the success it might be who develops his physical and mental natures and neglects his spiritual life.

We are recommended to "Render unto Cæsar the things that are Cæsar's, and unto God the things that are God's." If these suggestions be followed, and we claim they are thoroughly practicable, there need be no fear of the overcrowding of the profession. With the additional education which the able faculty of the School of Dentistry of the Royal College of Dental Surgeons, with their new and well-equipped building, can afford, these men will go out to become ornaments of society, an honor to their profession, and a credit to their preceptors, whom they will in after years rise up and call blessed.

SILVER NITRATE.*

By D. BAIRD, L.D.S., Uxbridge, Ont.

In presenting this subject, it is not because I have anything new to offer ("Verily there is no new thing under the sun" says King Solomon), but because I think there may be not a few of the young men who, like myself, when commencing the profession, are averse to it because of its caustic properties.

There was a time in my practice when I did not have it among my stock of medicines. I thought it was a deadly poison and so caustic that if introduced into the soft tissues of the mouth it would burn its way out. These fears have passed away since I have become familiar with its use, and now I use it more freely where it has to be employed than I would carbolic acid, and with less danger to the mucous membrane. I say with less danger, for there is this difference in the cauterization of mucous membrane by the two. Carbolic acid destroys and induces a slough and the ulcerative process, but if we touch a part with silver nitrate, the eschar remains for a time and then falls off, leaving the subsequent parts healed, or if an ulcerative surface secreting pus be touched by silver nitrate the succeeding discharge is immediately converted into lymph. It is the property of carbolic acid, on the contrary, to induce not only ulceration but suppuration. The silver nitrate and carbolic acid are as the poles to each other; the former preserves, the latter destroys; the former induces cicatrization, the latter ulceration. In our professional use of it, such a slight amount of it is required that if properly handled no harm can arise. But should an accident happen, the application of sodium chloride (common salt) to the part is all that is necessary.

Before using this remedy in connection with any disease of the dental organs, it is well to advise the patient as to its effect in discoloring, for once applied it is only with difficulty that it can be erased. Regardless of the great objections to its use, viz., discoloring, I will enumerate some of the cases where it may be employed in treatment of the diseases of the teeth.

Devitalizing receded pulps where an endogenous growth seems to obliterate the pulp chamber. Such teeth are generally bothersome after the death of remaining tissue. A five per cent. solution introduced into the root, I have found beneficial, preventing trouble from thermal changes, and in relieving soreness on percussion.

In bridge work, where the enamel is cloven from the tooth to any

*Read at eighth annual meeting of Ontario Dental Society, Toronto, Ont., 1896.

extent to cap, a deposit of silver nitrate in the dentine will prevent thermal shocks, and consequent death of the pulp. White rings or softening of the enamel at the gum margin, or extreme sensitiveness to the necks of the teeth where the gum has receded, or in erosion, silver nitrate is one of the most effectual remedies that can be applied. A small crystal of the powdered salt placed on the moist surface and rubbed well over it with a wood point, is about all that is required. In erosion, perhaps the better way is to cover it with cement filling till it is permanently set in the dentine. Sometimes erosion has destroyed so much of the tooth that a filling will be required. This preliminary treatment insures against subsequent failure of the operation.

Masticating surfaces where attrition has worn down the enamel until the interzonal layer of dentine becomes exposed, is a good place for the use of silver nitrate. Apply the crystals with a stick to the moist surfaces, rubbing in well, then immediately rub a few grains of amalgam on, and instruct the patient to triturate the teeth, which will force it still better into the polished surface. Give the patient a mouthful of water to rinse the mouth, and renew the operation two or three times at successive intervals of a few days, getting the surface well blackened, when you are assured a heavy deposit coats the parts, and in every case sensitiveness will disappear.

In pyorrhœa, after removal of calcareous deposits, a crystal shoved into the pocket and left for a few minutes and then washed out has rewarded my efforts by effecting a cure where other remedies failed.

It is a valuable addition to our list of remedies as a preservative to the deciduous teeth, keeping them to a proper time for shedding, and thus aid in the eruption of the permanent set. Before I commenced the use of it for this purpose, I was at my wits' end to know what to do for little patients three or four years of age. But with this valuable agent at our disposal we can gladden the hearts of the parents and give our little patients and ourselves an amount of comfort that every dentist can appreciate.

The line of procedure in these cases would be about as follows: Take, for instance, the approximal cavities in the posterior teeth. Where the child is not too timid, cut away to a "V" shape, and by a piece of Gilbert's temporary stopping, large enough to fill the cavity, softened by heat and touched to powdered crystals of silver nitrate, and inserted in such a way as to bring the crystals into direct contact with the walls of the cavity; pack firmly and leave there to be worn away by mastication. When that has taken place the surface of the cavities treated will be found black and hard, with no sensitiveness to the touch or change of temperature. Then the little patient will be older and better acquainted with the

dental office and will readily submit to whatever treatment you think advisable to give them.

In sensitive dentine in adults' teeth, its action is with good results in from one to three months' time, treated in the same way as in deciduous teeth. In those terribly sensitive buccal cavities in molars it acts like a charm, relieving sensitiveness and hardening the walls of the cavity.

In those after-pains from extraction of teeth caused by the nerve breaking in the canal and being left in the socket, or even where there is no evidence of a portion remaining, if there is irritation at the point owing to the union between the tooth and the maxillary nerve, an application of silver nitrate will be found to give relief.

It is not an unusual thing to have pregnant women call with a lot of decayed teeth, so sensitive that the use of a tooth brush is impossible, and extraction is out of the question. Silver nitrate is our fort again. First go around them with a saturated solution, and in a few weeks fill the cavities with temporary stopping dipped in the crystals.

ACTION.—As to the action, I believe that nitric acid is liberated through the affinity for H_2O , and affects the animal matter in the dentine, and the silver fills up the dentinal tubules to some extent. Its application may be made in four ways: By the powdered crystal to the moist surface, or a solution newly made; or by silver wire dipped in nitric acid, or by dipping blotting paper in a forty per cent. solution of silver nitrate and drying it; cut a piece the size to lay in the bottom of the cavity. In nearly all cases protect from the fluids of the mouth by some temporary covering.

BLEACHING AGENTS.—These are few, though there are many which can be used out of the mouth. Cyanide of potash has been recommended, and does its work well; but I would caution against its use. It is very poisonous. I had a case where a little got on the inside of the cheek, which almost resulted in blood poisoning. Iodide of potassium, a stick, and pumice powder is safer. Where the rubber dam can be used touch the spot with iodine, which will convert the silver into silver iodide. Silver iodide is soluble in potassium iodide, then wash with water. This process is slow, but leaves the tooth in good condition. Some grind discoloring off with corundum stone, but this causes a recurrence of trouble.

WHY DO SO MANY AMALGAM FILLINGS FAIL ?*

By G. E. HANNA, L.D.S., Ottawa, Ont.

I presume the question is not intended to include those cases of recurring caries clearly due to predisposing causes prevailing in the oral cavity ; such causes have, and ever will, continue to produce recurring decay, irrespective of the filling material used or the quality of operations performed.

I deny that we should in any degree recognize failure in those cases of recurring caries due to causes and conditions entirely beyond our control, any more than the physician acknowledges failure in his treatment, when a patient has a second seizure of typhoid a year or two subsequent to treatment for the same disease.

It is not the intention to enter into any so-called scientific solution of this question. I propose briefly to state the conclusions arrived at from years of observation of amalgam fillings inserted by others as well as by myself.

I am convinced all cases of recurring caries which may be properly called failures are due to two general causes—bad amalgam and defective preparation of cavities. Bad amalgams may result from improper proportions of desirable metals, or from the introduction of some objectionable element in the alloy, or a good alloy may be spoiled in the amalgamation by leaving too much mercury, or by using impure mercury, or by allowing the amalgam to partially set before using.

Amalgams made from improper alloys shrink or swell in the setting—according to the excess of either metal—in either case making a defective operation. Fillings made from amalgams too soft, or partially set, lack the so-called “edge” strength, and have not the resistance necessary in grinding surfaces. The alleged “balling,” or “spheroiding,” of amalgam fillings I have not observed. Defective preparation of cavities is undoubtedly responsible for the greater number of failures. Without implying censure on my professional brothers, or admitting fault on my own part, I make the statement that three-fourths of all amalgam fillings in approximal cavities have been placed on imperfectly excavated or defectively formed cervical walls. The disposition to avoid “hurting” the sensitive and timid, is a barrier few of us have the moral courage to surmount, and a still smaller number can afford to disregard the protests of such patients. The

*Read at eighth annual meeting of Ontario Dental Society, Toronto, 1896.

most thorough and conscientious graduate soon learns in practice, that having to renew his fillings at unreasonably short intervals, does not have such dispelling effects on his clientele as the reputation of being "rough and harsh," as it is generally termed.

There are, however, defects in cavity preparation which none of us are justified in overlooking, viz., the proper trimming and beveling of ragged enamel borders in all cavities, and the thorough excavation of underlying carious matter, where it is not desirable to cut away projecting enamel on grinding surfaces and in buccal cavities.

My estimation of amalgam as a filling material may be stated by saying, if a good article be used in the same locations, under similar conditions and with equal exactness required in the use of gold, we find it no mean competitor with the fellow-metal in arresting the progress of dental caries.

WHY DO AMALGAM FILLINGS SO FREQUENTLY FAIL?*

By G. S. MARTIN, D.D.S., L.D.S., Toronto Junction.

This question would indicate a belief on the part of the person who proposed it, that amalgam fillings fail very much more frequently than fillings made of other materials. Amalgam fillings fail more frequently than any other, primarily for the same reason that more people die in China in a given time than in Canada. I think you will bear me out in saying that more amalgam fillings are inserted than of all other materials combined. While not wishing to enter into or draw this convention into a discussion of the relative values of amalgam and other available materials, I will take the opportunity of repeating the statement I have seen in print somewhere: "Amalgam fillings will save many teeth for a longer period of usefulness than will any other material." Whether or not this is recognized as a principle by the profession, we find amalgam used in teeth of the frailest nature, where the "life expectancy" is extremely low, and in cavities almost inaccessible, where thorough preparation is almost out of the question. Failure in these cases is too often unjustly laid on the material. Amalgam may be said to be in the position of certain frail mortals who are often described as "more sinned against than sinning."

The ease with which amalgam may be plastered into a cavity no matter how indifferently prepared, has tempted many of us to less careful work, than we know in our inmost souls to be

*Read at eighth annual meeting of the Ontario Dental Society, Toronto, 1896.

compatible with durability. In preparing for the insertion of a gold filling we are careful to remove all decay, to cut margins down square and smooth. Are we always so careful in the preparation for amalgam. We trust to thin and brittle edges of enamel unsupported by dentine—edges that we know would be pounded off were we inserting gold; we leave slight dark spots unremoved; we do not prepare cervical margins thoroughly enough. In approximal cavities amalgam fillings are often wanted without attempting to restore the contour of the tooth and the side walls are left so that the margin of filling is at the point of contact, thus endangering the permanency. There is also a lack of carefulness on the part of some operators to finish approximal cavities properly. A fine tape or sandpaper strip is the best means of finishing. You have often seen approximal fillings where there is a mass of amalgam overhanging the cervical portion of the cavity in such a way as to be an irritant and constant source of trouble. Food particles are thus also retained at the weakest point of the cavity and the inevitable follows. Crown cavities of very innocent nature are filled without a careful following out of seams of decay between the cusps.

Many cavities are filled entirely with amalgam when combination fillings would be infinitely better, as in large fillings the tendency to shrinkage is lessened by filling the greater portion of the cavity with cement. Before the cement is set the amalgam may be burnished, thus adding strength to frail cavity walls.

There is, however, a danger which must be guarded against here. The margins of the cavity must be freed of all cement, or otherwise there will soon be a leakage from its dissolution. I have noticed this mistake in cases where pulps have been capped with a small amount of cement.

The use of a moisture-proof varnish is of great advantage in a cavity, as margins are better protected. A good varnish for this purpose is composed of virgin rubber and gum mastich dissolved in Ch.-Cl_3 . Although some of our best authorities advocate a soft amalgam, I believe in a pretty dry mass carefully inserted and followed by use of a rotary burnisher in the engine, and tin or gold-foil or alloy filings used on top to absorb any surplus mercury that may come to the surface. Your filling will then be hard almost by the time your patient leaves the chair. It is preferable where possible to have patient in a second time for polishing, as this tends to carefulness and leaves filling in a better condition of polish.

Finally, my brethren, amalgam fillings fail because they are inserted for forty cents. If the people want a dollar's worth for forty cents, some men will always pretend to give it, and amalgam fillings will frequently fail.

ARE COMPOUND FILLINGS DESIRABLE ?—YES, AT TIMES.*

1. In cases where pulp is alive and nearly exposed, a metal applied directly to pulp would cause irritation and finally death of the pulp. In this case we use some non-irritating guard filling.

2. In cases of pulp exposure, a capping is necessary, if it is desired to try saving pulp.

3. For purposes of economy, *e.g.*, in gold filling may fill bulk of cavity with cement and finish with gold.

4. In approximal cavities cement is useless, where it approaches the cervical border. If desired to fill with cement, use amalgam or some substitute at gum margin. Amalgam may often be combined with gold by filling lower half of cavity with amalgam, either waiting until the amalgam sets before finishing with gold or packing gold on the soft amalgam.

5. When the pulp is removed, the roots are seldom filled with same material as the crown. This may be called a combination.

6. Tin and gold rolled together has the advantage in point of color. Have never used it.

7. Where walls of enamel are thin and translucent, cement should be used under gold or amalgam. Care should be taken to have all margins free of cement before filling over it, as otherwise a leaky filling will result.

8. Aluminum fillings are incorporated with the powder of cement fillings. The utility of this is doubtful, as the maker has by experiment already what is to him the exact amount of rocky base to form best resistance. Burnishing of aluminum points down over cement will not make complete covering, and the metal interferes with setting, leaving a pitted surface.

9. A large amalgam may be faced with gold by using judicious undercuts or pits. This is nearly as much or perhaps more work than to make a gold crown.

10. Where a gold filling has become defective it may be repaired with amalgam. Like the matrix, this should be used with caution.

11. An inlay of porcelain may be called a compound filling. If the space between inlay and tooth be wide, some of the cement

* Answer by Dr. Leggo, Ottawa, before the eighth annual meeting of Ontario Dental Society, Toronto, 1896, to question, Are compound fillings desirable, if so give proper combinations and utility?

may be cut out and a gold filling inserted that will have the appearance of a small band of gold.

12. In cervical cavities difficult to fill with gold, when the cavity extends beneath gum margin, fill amalgam above gum line and finish with gold if desired.

13. Those who believe in electrical disturbances when two fillings of different materials are placed in same mouth must use gutta percha or some such material for purposes of insulation.

Finally. The combination of amalgam fillings and a homœopathic physician is an incompatibility and is not a success.

CAPPING PULPS.*

By A. H. ALLEN, D.D.S., L.D.S., Paisley, Ont.

The question of capping pulps opens up, as we all know, a wide field for discussion, and I am sorry that it is not practised to a greater extent. I find that most of the Toronto dentists, and, I believe, most throughout the Province, practise devitalizing the pulp as soon as they find it exposed—a practice I most certainly condemn. I believe that 95 per cent. of exposed pulps that have never been disturbed enough to give symptoms of pain or soreness, are saved for many years when capped according to my method, or in similar methods, so long as the important points are attended to. These we will know later on. Many of those that have ached, and are even sore upon percussion, will readily yield to treatment and take kindly to a capping.

How, then, can dental surgeons satisfy their consciences in devitalizing? If anyone can prove to me (I have never read or heard of anyone bold enough to make the assertion) that a dead tooth is as good as a living one in good condition, and that its usefulness will be continued to as great a length of time, then I say, destroy the pulp in the easiest and most painless way possible, and never try pulp capping. Then there is the question of fees. One can cap a pulp and fill the tooth for a great deal less money than for treating and filling root canals as well as crown cavities. This is no small consideration to the patient, and intelligent ones appreciate very much your endeavors to do good work in the cheapest way.

A great many dentists say that "they extract the pulps on the principle that dead men tell no tales." This seems to me a

*Read at the eighth annual meeting of the Ontario Dental Society, Toronto, 1896.

confession, that they are willing to do patients a wrong, rather than have some ignorant person once in a while complaining of bad treatment at their hands, because of the failure of a pulp to tolerate the filling. All dentists have to suffer more or less from the ignorance of patients as regards our work, and I question very much if those who pursue the relentless destruction of pulps, do not suffer as much or more from this form of persecution than those who cap pulps with fair judgment and skill. I do not believe that anyone is always successful in devitalizing and treating pulps so as to make them comfortable and useful, nor do I believe that anyone can be always successful in capping pulps to save them ultimately from death. I feel, too, that there is some reason in the claim that climatic influences have something to do with the success or failure of capping pulps, but not nearly so much as is claimed by some.

The chief causes of failure may be attributed to one or more of the following causes: (1) Failure to remove all causes of irritation, such as loosened decay or foreign matter of any kind that may not be tolerated by pulp. (2) Too much injury to pulp in the preparation of cavity. (3) Too little treatment to remove inflammatory symptoms. (4) Too much treatment to remove inflammation or the effects of irritation. (5) Failure in drying of cavity and thus leaving an aperture for the play of extremes of temperature, the moisture not allowing the cement to stick to walls. (6) Failure to locate, and therefore to treat, all the exposure. Sometimes the exposure may be so fine that the naked eye cannot detect it, and if there is a second exposure of this kind in the same cavity, only one may be properly capped. (7) Too small a capping. (8) Too much pressure—a very fruitful cause of trouble and that requires a nice touch and skilful handling of the instruments to avoid. (9) Too much spreading of the matting on inner lining so that cement does not thoroughly envelope it, and is not therefore firmly attached all around it.

If the fine powder of the oxyphosphate of zinc cements be mixed with creasote to a creamy consistency, so that it will lift on the end of a plugger and touched to the pulp (not pressed to cause pain), and then gently spread with batting, rolled soft or soft spunk, at the same time drying the cavity, and the cement spread gently over it so as to stick to wall all around the lining, and over as much of the sensitive dentine as cavity can afford without filling retaining grooves—there is not much danger of trouble where the patient is in fairly good health and not hypersensitive; but I would condemn no case without a trial if there was no irritation beforehand.

Where inflammation has set in, as indicated by pain in temple or ear, soreness upon percussion results are not satisfactory, though a great many of even these can, by treating to remove inflammation, be made comfortable for a long time. If it only aches at night

and is not tender upon percussion, it is a good indication that a little treatment, such as a mixture of creasote and chloroform applied to the pulp, and aconite and chloroform (equal parts) applied to gum over affected root, will relieve inflammation. If we can save a pulp for two or more years, I consider we have added that much usefulness of the tooth to the patient, and therefore indiscriminate devitalization is to be deplored.

Correspondence.

OUR CHICAGO LETTER.—No. 3.

By C. N. JOHNSON, L.D.S., D.D.S., Chicago.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—The Hayden Dental Society, named after Dr. Horace H. Hayden, of revered memory, was organized principally for the benefit of dentists in that part of the city formerly called Englewood. Meetings are held monthly at the offices or residences of the members, and much benefit is thus derived by men who would not ordinarily care to come to the other society meetings held in the centre of the city.

The Odontological Society may be said to be one of the most exclusive of any in Chicago. It has a membership of fifteen—twelve active and three honorary. It meets monthly, the distinctive feature being that the members dine together and then proceed to the discussion of some scientific topic. The meetings are really very enjoyable and profitable. Much good has been done by this society, notably the publication of a pamphlet several years ago on the treatment of pulpless teeth. It would sometimes seem that an additional good might be accomplished by the regular publication of the discussions in some journal. Occasionally a paper read before the society is published, but it is seldom that the discussions are written up. When it is considered that some of the most progressive men in the city are connected with this society, it would appear profitable to have their deliberations presented to the profession. An innovation has been introduced during the past year whereby the meetings, instead of being held down town at some hotel as formerly, take place at the residences of the members. One evening the meeting is held at the residence of one member, another night at another, and so on in rotation until the round is completed. The member at whose residence the meeting is being held is the host of the society, and is responsible for the entertainment of that evening. He gives a dinner, and

then reads a paper on any topic he may select. This plan has resulted in some very enjoyable evenings both socially and scientifically, the most obvious drawback being the fact that Chicago is a city of immense distances, and some of the members live far apart. This causes inconvenience in reaching the place of meeting and returning home late at night. When the meetings are held down town at a common centre all of the members can attend with little difficulty, and it is possible that the society may return to this plan.

But I have surely said enough—more than enough—about the dental societies of Chicago. I can only wish that the readers of the *DOMINION DENTAL JOURNAL* could have the privilege of attending these societies, or societies like these, and reaping the inestimable benefits to be derived from such association. My personal experience with the societies of Chicago and of the State of Illinois, has been such as to make me a most enthusiastic advocate of society work, and I can ill imagine how men get along in the profession and live up to the highest possibilities of this progressive age without some such association. Canada could well support more societies than it has at present, and Canada must have more societies if the reputation of Canadian dentistry is to be advanced as it ought.

And now, Mr. Editor, in this connection, I wonder if you will allow me to preach a little sermon to the dentists of Canada, on a subject that has long impressed me forcibly, and is impressing me more and more as the years go on. It is my good fortune to spend most of my vacations in Canada. I go there at least twice a twelvemonth, and I travel somewhat extensively while there. Last summer, for instance, I drove over the country districts to the tune of five or six hundred miles—and, by the way, let me pause to remark that I drove one of the best teams that were ever hitched together in Canada. You see, Mr. Editor, my horsey propensities must crop out in spite of myself, even in correspondence to a professional journal; but I justify myself somewhat in the present instance, because it gives me the opportunity of saying that I consider this one of the very best ways for an overworked dentist to spend his vacations—always provided that he loves horses as I do. I could write an eloquent dissertation on this subject, but my charity leads me to forbear.

Well, in my travels through the nooks and corners of Canada I am not accompanied with closed eyes. I manage to see many things of interest; but most of all, I see the condition of the people's teeth; and let me tell you frankly, that if dentistry in Canada is to be practised along the lines it has been following in the last decade, you will have in a few generations a race of "pie faces" over there that will vie in monotony with the most exclusive

tribe of flat-faced Indians. Of course, I do not for a moment intimate that your robust and canny Canuck will ever look like an Indian, or that your winsome and rosy-cheeked maiden will ever resemble a squaw ; but if the mouths of your growing generations continue to be managed as they are at present, they will take on a uniformity of expression, or lack of expression, that will soon become a national characteristic. I refer to the havoc made by the tooth-puller, beside which the "slaughter of the innocents" becomes mere by-play, and the substitution of artificial dentures on lines suggestive of the china shop. The extreme youth at which this defilement of the human face divine is generally begun seems amazing. Take an average crowd of young people at a country gathering of any kind, and not one in ten has a perfect set of natural teeth. If they are not decayed or covered with calculus, they are missing entirely ; and heaven shade us while we blush at the artificial substitutes which usually take their place ! I have seen a dozen sets of teeth of an afternoon, worn in as many mouths, with little more variation among them than there would be in a row of china dishes set up in a butler's pantry. This in face of the fact that the individuals wearing them were of all shades of complexion, temperament and individual characteristics, from the lightest blonde to the darkest brunette, and from the largest and thinnest in face to the shortest and chubbiest. The one monotonous line of small, white, regular chinaware, glistening an accompaniment to every smile of the victims, is a spectacle for the gods of dentistry to go out in the wilderness and weep over.

"Something is rotten in the state of " dentistry in Canada when such things can be. I have studied the condition somewhat closely and looked into the causes that have led up to it, and if you will permit me I will enumerate briefly the things that seem to me to be accountable for it. First, is the lack of care on the part of the patient ; second, the lack of faith in filling teeth, caused by so many failures following this operation ; and third, the cheapness of artificial dentures. The reason that so large a per centage of teeth fail after being filled, relates not only to a want of care by the patient, but also to imperfect work by the operator. This is not intended as a wholesale arraignment of Canadian operators, but it is not saying too much to affirm, that the majority of dentists in Canada are not living up to the highest possibilities of their art. Nor can they be expected to do so, when their main energies are directed towards the replacement of lost organs rather than the saving of the natural ones. I have talked with many of the country practitioners over there, and have been surprised to learn what a large proportion of their practice—among most of them—consists in prosthetic work. They invariably tell me that they are simply submitting to the inevitable, that their patients will not

have their teeth filled, and would not take care of them even if they did have them filled. To be sure, there is a nugget of truth in all this, and yet it leads up to the kernel of the nut I wish to crack with my Canadian friends.

The one great limitation working against more satisfactory results in the conduct of the average practice in Canada lies in the fact, that the dentist allows the patient to dictate too much as to what shall be done and the manner of doing it. The Canadian people are too prone to demand of their dentist, that things be done in a given way, instead of relying on the judgment of the operator as to the proper course to pursue. And I fear the average Canadian practitioner has not sufficient stamina to insist on doing it the proper way, or doing it not at all. If dentists would take on an independence of spirit, and contend for the sovereign right which every true professional man should command, the people would soon recognize this quality among dentists as they do among ministers, lawyers or physicians. As it is at present, there is too much dictation on the part of the patient, and the result is as we see it.

A young girl notices some china teeth in the mouth of another girl, becomes envious and wants some like them, or rather she wants some a little bit nicer—straighter, smaller and whiter. And the dentist, fearful of losing her patronage, does her bidding like a bond-servant. Thus the wretched work goes on, and we see the defilement all over the land. Some of the most beautiful girls in all the world—for they have them in Canada—are rendered expressionless and inane by this line of practice, and it is time the dentists of that country took on new methods and developed their calling into the dignity of a delightful art, which dentistry aspires to be when practised on the plane of its highest possibilities.

But, Mr. Editor, I must not preach so long that I become prosy, and to make sure that I avoid this I must stop at once. My final wish is that whatever I have said that may seem critical of my Canadian colleagues shall be taken as kindly as it is meant.

OUR NEW YORK LETTER.—No. 1.

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—As Canadian dentists—some of them—are frequently seen on our side of the border, fraternizing with us, we have it in our heart to tell them a little of the goings on in our "Greater New York." Let us remind you that in the near future when you come among us it will be no longer Manhattan Island, but a large part of Long Island, Staten Island, etc.—the etc. would include Jersey if they had been in United States longer ; but, as you may

know, they only got in last November by electing a Vice-president. It is a saying that originated with someone, that as goes the politics of the C. D. A., so goes the politics of the A. D. A. There is so much "fit" among these fellows, particularly among meeker men, there is no telling what they may do. We will say this, if any of you Canucks fail to get a square meal for a satisfactory fee, resolve to try to be at one of the monthly meetings of the C. D. A., and get one of their dollar suppers, and you will not soon forget it—nothing like it this side of a lumber camp in mid-winter—and anyone that has eaten brown bread and beans cooked in a "bear hole" would exclaim nothing can excel such a feast. If you choose to come in mid-summer you will find the Society all in camp at Asbury Park, and there you can have the next best thing they can give you, *i.e.*, a free run of all the park and the whole of the Atlantic as far as one can see, and a burlesque entertainment by Prof. Foster Flagg, of Philadelphia; he has never been equalled. Since his first attempt at plastics before the Odontological Society of New York, *viz.*, "The New Departure," he has never improved upon that, although he has tried it. Only this week he has appeared before the second district and the United first district in Brooklyn. Report says he did not rise to any of his former altitudes. He has been a very useful member of our calling; although going towards eighty, it is a marvel how well preserved he is. We think he is the nobbiest dentist in Philadelphia, if not the best looking. We are glad that all good men don't die young. The dental event of the year has come off this month. Never has the anniversary occasion of the Odontological Society been dedicated with greater success than this month. When an active practitioner will cross the ocean in mid-winter, subject to the freaks of the angry billows, that show no mercy to a fastidious stomach (if he was a stomatologist it might be different), we are led to believe that he thinks he has something worth coming for. Not many weeks hence the reading practitioners will have an opportunity to peruse, we think, the ablest and most useful paper ever presented to our profession. We believe that Dr. J. Leon Williams, of London, England (No. 30 St. George's, or Hanover Square), stands as the most brilliant scientist—in the line he is now working—of the age. We know this is saying a good deal, but we believe in putting dentists in their rightful place. We have not been guilty of doing too much of this. Dr. Talbot told the California Dental Congress that it was a great failure of ours, *i.e.*, giving credit to our fellows. Not all scientists are "all-round" men; but Dr. Williams is a bright exception, everything that he touches has the mark of talent upon it. We are told by visiting Americans that he has doubtless the best practice in London, embracing most

of the leading literati and artists. His talent as a conversationist gives him the *entrée* to the best society in this connection. His ability as an artist has been exhibited with financial success, associated with his literary ability. His first was a volume by Putnams, of New York, "The Haunts of Washington Irving at Sleepy Hollow on the Hudson;" his second, by Appleton, of New York, "The Early Scenes of Shakespeare at Stratford on the Avon." A copy of the latter was presented by the author to your noble Queen Victoria, and acknowledged by her in a letter. We are indirectly informed that he is contemplating a similar work from the scenes in Switzerland to be published by a New York firm.

We are glad to emphasize that dentists are not all "tinkers" and "tooth carpenters." There are others Johnson, Ottofy and Newkirk of Chicago, Ottolenguie of New York, etc. I think these have also shown that their talents found attractive attention outside of the dental office. Dr. Williams' paper was titled the "Comparative Anatomy of the Teeth and Some of the Phenomena of Decay of Enamel." It was beautifully illustrated by ninety-five micro-photographs, which were thrown upon the screen by the stereoptican light. They demonstrated the claims of Dr. Williams, which were conceded by all as a demonstrated fact, that dental caries will no longer be incapable of explanation. Bacteria take the initial step, without a doubt. Wherever they can get a point of weakness in structure, and the environments are favorable to their pathogenic condition, they eject an acid (or acids), possibly lactic or acetic, through their albuminous pseudo-phobic mouth, which so protects itself from the association of the surrounding fluids of the oral cavity, therefore dissolving, atom by atom, the enamel until the dentine is reached, and as the destruction deepens the accumulation of bacteria hastens the devastation of the tooth structure. Predisposition is first considered; active causes second, and antiseptics, latterly. We have never witnessed such undivided attention given to any reading of a paper, and when we consider that two and a-half hours were consumed, it was a tension upon all, but not for a moment did interest slacken. On all hands by acclamation it was voiced that the paper needed no discussion. But more from a complimentary motive, Drs. Black, Kirk, Harlan, Burkhard, Ottolenguie, Darby and others said a few pleasant words, and the invitation was given to others that had been invited to take part in the discussion to write out what they would have said, and their remarks would be published in the proceedings of the Society (in the *Cosmos*). We wish we could have dropped the Canadian dentists down into the elaborately decorated rooms of the Lotus Club and looked upon the Round Table, so beautifully arrayed with a lavish display of strewn flowers of multiplied forms and

colors, and around this table were seated twenty-six dentists, including one literary gentleman, Mr. Arthur Warren, the London correspondent of the *Boston Herald*, an intimate friend of Dr. Williams—in fact they have figured as co-partners in literary work in our American magazines, greatly to their credit. We do not know how much our friends across the border are accustomed to dental festivities, but if they could have been with us, and seen or participated they would have carried away an itching to repeat it at home. Among us American dentists, there has been no little innocent indulgence in this regard since the late Dr. Atkinson came among us and inspired us with his noble enthusiastic social nature, turning the icebergs of exclusiveness into streams of warm professional brotherhood—we trust never to die out. Some of you know the blessings lavishly heaped upon them by his marvelous power and incentive to higher attainments of professional skill.

Dr. Williams has been exceedingly happy and fortunate in receiving such attentions as has been accorded him throughout his entire visit. The supper given him was a most gracious termination of his stay, and he can but carry back the choicest recollections of all that has been lavished upon him. Dr. A. L. Northrop, so largely known for his marked ability as a presiding officer, quite excelled all past efforts as master of ceremonies; his call for the different speakers was happy in a large degree, and all responded in the same spirit. Drs. Jarvie, Harlan, Carr, Perry, Hodson, Walker, Lity, Starr, the author of this letter, and Dr. Williams responded to the call of the chairman. The menu was elaborate and choice. Let us suggest that you thaw out some of your bright men, and give us a chance to show the liberality and appreciation of the New York Odontological Society.

GREATER NEW YORK.

Question Drawer.

Edited by DR. R. E. SPARKS, M.D., D.D.S., L.D.S., Kingston, Ont.

Q. 28.—It often happens that upon removing pulps that have had arsenical application it is found that near the end of the root or roots the nerve is extremely sensitive. This is particularly so in case of molar roots. What is the best method of treatment?

A. 1.—Dr. Beacock's answer to question twenty-six led me to try his treatment in these cases. I was quite encouraged to continue experiments. Mix on a slab as many cocaine crystals as a drop of carbolic acid will take up. Keep the tooth dry and convey the mixture to the root canals by means of a few shreds of cotton

on a broach. Then, with a new broach of proper size work up the canals little by little. Withdraw the broach frequently, going a little farther each insertion. Generally, after a few minutes of patient manipulation you will have the satisfaction of finding the broach reach the end of the root. R. E. SPARKS, Kingston, Ont.

2. In my experience, directing a current of hot air into root canals and followed up by injecting oil of eucalyptus, or forcing it up with rubber compress; repeat the treatment three or four times or more, if necessary, at intervals of three days, and seal cavity well during same time; also make external application of mixture composed of iodine, aconite and chloroform in proportion of 3, 2, 1.
O. H. ZEIGLER, Toronto, Ont.

3. Use 4 per cent. solution of cocaine by hyperdermic point or put your wires in roots, and apply mild current, as in cataphoric treatment of dentine. Use 20 per cent. solution in cataphoric treatment.
P. BROWN, Montreal, Que.

Q. 29.—What is the best method of treatment for toothache and neuralgia, so frequently found in pregnant females?

A. 1.—Inject a few drops of the Edinburgh solution of bimeconate of morphia in the gums over the affected tooth or teeth.
W. G. B., Montreal, Que.

2. I have been most successful in the use of poke root or *phytolaca decandra*. Dose from 5 to 10 minims every hour for three or four hours before retiring in the evening.
O. H. ZEIGLER, Toronto, Ont.

3. Odontalgia is a frequent and distressing accompaniment of pregnancy. The pain, however, is occasionally a symptom of a pure neuralgia or of some reflex or functional disturbance and in the management of the disorder this fact must not be lost sight of. Much more often, however, it is a symptom of actual caries. There is no doubt that pregnancy predisposes to caries, the cause for which may arise from the existence of acid dyspepsia, a frequent accompaniment of pregnancy. Apart from this there may be an alteration in the buccal secretion by which it is changed in its reaction, thus enabling it to attack the teeth. It may arise from a more remote cause, namely, a morbid determination of the ossific elements of the teeth of the mother to the bones of the growing foetus. The part which bacteria plays in producing caries must not, however, be lost sight of. The treatment must be, as far as possible, preventive, in the form of mild antacids administered internally and the frequent use of tooth brush or floss silk, supplemented by antacid and antiseptic mouth washes, such as soda biborate and thymol. Where actual caries exist there is much

unreasonable dread, not only among the laity, but among physicians as to interfering during any period of pregnancy, and some recommend that all operations—even slight fillings—should be postponed until delivery. It seems to me certain that the suffering from severe toothache is likely to give rise to far more severe irritation than any mild operation required for its relief; besides, the morbid condition is likely to unfavorably influence the development of the child. Any tedious operations, like the restoration of form in decayed teeth with gold, are inadmissible, and when interference is believed to be necessary it should be as free from pain and fatigue as possible. Whenever toothache exists I strongly advise to seek the advice of the dentist, have the teeth carefully examined, and if the condition will warrant it, have a temporary filling inserted with the hope of relieving the sufferer and saving the tooth. When the tooth is beyond repair I do not hesitate to advise extraction, giving chloroform or ether, if necessary, to avoid shock or alarm, and I have yet to see any but the most satisfactory results follow.

R. W. GARRETT, M.D., Kingston, Ont.

Prof. Obstet. Med. Dept. Queen's Univ.

QUESTIONS.

Q. 30.—What is the difference between adhesion and atmospheric pressure applied to the adaptation of sets of teeth?

Q. 31.—How do you calculate percentage solutions?

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

TOTAL NECROSIS OF THE LOWER JAW AFTER OSTEOMYELITIS.
 Oskar Faisst (*Beitr. z. klin. Chir.*).—A female child twelve years old was suddenly taken ill, with high temperature and pain around the lower jaw. Very marked swelling developed, interfering with speech and drinking. After three to four months an abscess developed on the right side. A fistula remained for three weeks. All teeth fell out. Gradually a bone appeared in the mouth which became more and more prominent. On examination the mouth could not be closed, and foul smelling pus and saliva were escaping. The entire inferior maxilla was palpable up to the joints and was comparatively loose. The urine contained a large quantity of pus. The entire jaw was removed in two halves. Unfortunately, however, this was too late, for the prolonged suppuration gave rise to amyloid degeneration of the kidneys. Cases of this kind are very rare.

DR. H. A. HARE reports a death following the administration of nitrous oxide (*Therapeutic Gazette*, December 15th, 1896), illustrating the influence which nitrous oxide gas may have when administered to persons suffering from atheromatous blood vessels. A man between fifty and sixty years of age, visited a dentist who makes a specialty of administering nitrous oxide gas, to have a couple of teeth extracted. He had taken the gas on previous occasions without any trouble. On this occasion he took the ordinary quantity, his teeth were extracted and he rapidly returned to consciousness. He left the chair and walked to a wash stand to rinse his mouth. He then complained of numbness in his right hand which extended up his arm and to his leg and side. He was put on a sofa, where he became unconscious; breathing was stertorous. In a few minutes he became absolutely insensible. Venesection and other measures were resorted to. He died twelve hours after taking the anæsthetic. The rise in the arterial pressure, produced by the gas, may cause rupture of a blood vessel in those having a tendency to apoplexy.

MOUTH PROTECTION AGAINST BACTERIAL INVASION.—H. Bourges, in the department of experimental pathology of the *Rev. des Sci. Med.*, gives a brief review of A. Hugenschmidt's experimental studies of the different methods adopted by the cells for the protection of the buccal cavity, against the invasion of the pathogenic bacteria, as described in his "These de Paris" (1896). Dr. Hugenschmidt doubts the claim that the saliva possesses bacteria-killing properties, and also its role in weakening the virulence of pathogenic microbes. He thinks that the protection against bacterial invasion is due to the following conditions: (1) The chemical properties of the saliva and the soluble products of the microbes contained therein excite an intense diapedesis which is carried on in the mouth, and which attains its maximum at the surface of wounds, bathed by saliva. (2) The mucus of the buccal cavity, when there is a suspension of the secretion of saliva, possesses bactericidal properties. (3) Incessant epithelial desquamation. (4) Vital concurrence eliminating the bacteria, not acclimated. *Amer. Med. Surg. Bull.*, February 10th, 1897.

INDISCRIMINATE USE OF COCAINE.—The topical use of cocaine is attended with a degree of danger at all times. Serious consequences more frequently follow its use in the deep urethra, nares or the gums than when injected into the body, or at the extremities. At no time is a solution of high percentage necessary, and the percentage should always be known. Many dentists use cocaine in a very reckless manner, and take no consideration of dosage whatever. They, as a rule, take no account of its constitutional effect, only thinking of its local action. Three cases of

cocaine poisoning having come under our observation within the past five months in the service of two prominent dentists, prompts the note of warning here given. In one case, on enquiry, the percentage was not known—possibly ten or twenty, he said. He just took some crystals and added some water, and injected a few drops into the upper gum over a canine tooth. * Poisonous symptoms were noticeable in less than three minutes; the collapse was severe, and only by energetic measures freely used was the patient's life saved. In both the other cases a ten per cent. solution was used, but the degree of poisoning was not alarming in one instance, while in the other it was exceedingly so. A very prominent dentist in the city told us that he frequently applies the pure crystal to the exposed nerve. We feel justified in calling attention to the very dangerous method of using a powerful poison. None of the active alkaloids should be used except in a solution of known strength, and then not in any indefinite quantity.—*Selected.*

SUCCESS OF THE VIENNA TREATMENT IN EFFECTING THE PASSAGE OF A SET OF FALSE TEETH. Henry L. Williams, M.D. (*Therapeutic Gazette*, January 15th, 1897).—A man, aged forty-two, swallowed a set of teeth while taking a drink of ice water. He made every effort to dislodge it by coughing and retching, but without result. His wife pounded him vigorously between the shoulder blades. The plate passed down the œsophagus with a sensation of scraping, followed by a feeling of relief. He was given two large pieces of apple to swallow, which he did without difficulty. The plate contained two central incisors and the left first molar, and having at each end a clasp. Measurement of plate was: Greatest length from tip to tip, one and three-quarter inches; the greatest width was three-fourths of an inch. The clasp encircling the left second bicuspid was of gold and projected one-quarter of an inch from the plate. The clasp upon the right side clasped right cuspid, and projected one-eighth of an inch from plate. It was explained to the patient that it would not likely pass the pylorus, also the danger if it did pass of being caught at some portion of the intestinal tract, and cause obstruction or perforation with fatal consequences. He declined to remain in hospital and also to take an emetic. He was told to drink copiously of luke warm water and mustard, and to eat only mashed potatoes for the next forty-eight hours. The patient returned the next afternoon. On reaching home he had taken a pint and a half of warm water with a tablespoonful and a half of Coleman's mustard. This failed to nauseate him but put him to sleep. At 2 a.m. he awoke and ate a large plate of mashed potatoes. After sleeping he again ate heartily of mashed potatoes at 9 a.m. He slept for an hour, and soon after

10 o'clock dressed and lay quietly on a lounge. Shortly before noon he felt a "scratching sensation" in left iliac fossa over the line of the sigmoid flexion of the colon, attended with an impulse to evacuate the bowels. This he did, and obtained a normal stool. Again in ten minutes he had another motion, discharging a large mushy mass, in which the teeth were discovered. There were large pieces of shaved beef as well as the potatoes protecting and coating the plate in its passage through the intestines.

TWO CASES OF TRIGEMINAL NEURALGIA AND TRISMUS ASSOCIATED WITH LOSS OF TEETH.—J. Sefton Sewill, M.R.C.S., L.R.C.P., L.D.S., Dental Surgeon, and author of "Sewill's Dental Surgery," St. Marylebone General Dispensary, etc. (*British Medical Journal*), says: Two patients lately under my care have presented some points of interest which it may be worth while shortly to record. Both were suffering from severe facial neuralgia, starting from and radiating about the temporo-maxillary articulation. For the sake of clearness it will be well to consider the general characteristics of both cases.

1. *Deficiency in Number of Teeth.*—Both patients were entirely edentulous as regards the upper jaw, and had but three or four teeth in the incisor region of the lower jaw; of the latter, in one case, one, and in the other, two, were carious, and were extracted by me. I would point out, as an important factor in causation, the absence of grinding teeth in both cases.

2. *The Nature of the Attacks of Pain.*—The pain in both cases was paroxysmal, the patients keeping the mouth closed in order to avoid excitation of pain and spasm. In the patient whose case is first described removal of her artificial teeth had this effect. Attempts at mastication had a like result in case two, but after wide separation of the jaws, while the patient was anæsthetized for the purpose of examination, as recorded later, the symptoms were materially reduced in intensity, for some days, occurring only under greatly increased stimulation.

3. *The area of the distribution of the pain* in each case presented marked features of similarity. It was partly local, but radiated over the area supplied by the auriculo-temporal nerve, that is to say, over a skin area including the front of the ear and temple, the point of maximum intensity lying in front of the ear along the upper border of the zygomatic process. In one case the pain appeared to be more extensive, though in a minor degree of severity, as it was clearly described as passing down the alveolar margins of both jaws unilaterally. Attention is called to the fact that branches of the auriculo-temporal nerve supply sensory filaments to the temporo-maxillary articulation.

4. *The Condition of Facial Spasm and Trismus.*—This facial

spasm was probably of a reflex irritative character, comparable to that seen in other conditions, as, for instance, in *tic douloureux*, where twitching of the eyelids becomes a marked symptom. It may be noted that the fifth and seventh cranial nerves are intimately associated; their cerebral origins are in close proximity, and communicating branches pass between the nerves themselves and between their exit from the skull and their termination, where the inter-communication is extensive. The jaw muscles were thrown into tetanic spasm during the attacks of pain, producing a temporary trismus.

5. *The atrophic condition of the masseters and temporal muscles* was due to disuse in both cases, and was so marked as to produce sinking in of the temporal region. This is no uncommon senile condition.

6. *Injection of the conjunctiva and increase of lachrymation* was noted in both cases on the affected side, and is also properly a reflex condition, due to the same causes as that already described above when referring to facial spasm.

7. *Absence of disease of the temporo-maxillary joint* was ascertained under an anæsthetic.

8. *No obvious disease of the teeth, gums or alveoli* was detected sufficient to account for the symptoms.

Case I.—A lady of about sixty years of age, looking older, owing probably to her extremely neurotic temperament, was sent to me by Dr. Ferrier. She had suffered for some considerable time—it was impossible to ascertain quite how long—from neuralgia referred generally to the alveolar borders of the jaws, and particularly to the left side of the face and head. On inspection of the mouth it was found that the patient was almost edentulous, having but four remaining teeth, all in the lower jaw (first premolars and the canines of either side). She was wearing dentures which fitted badly. Further investigation elicited the fact that she never voluntarily withdrew more than one of the plates from the mouth, as shortly after removal of both plates spasm of the facial muscles ensued, and violent neuralgic pains, radiating from the temporo-maxillary joint as a focus, occurred. The upper plate was a complete denture bearing incisor, canine, premolar, and molar teeth; the lower similar in character, but having spaces in lieu of teeth where her own remained. It may be mentioned that the necks—the junction of tooth and gum—of these remaining teeth were highly sensitive to mechanical irritation or changes of temperature; the premolars were extensively diseased and required removal. The canines were repeatedly dressed with the solid nitrate of silver, this salt having the property of obtruding sensitive dentine. The result was satisfactory. There was no disease of the articulation or jaw other than that confined

to the teeth and already described. The treatment to be immediately described in detail was carried out, the result being eminently satisfactory, the troublesome symptoms being relieved for about the space of two years. A few months ago the patient again came under my observation suffering from a slight relapse. On inquiry and examination it was found that one of her plates had been altered by another practitioner, and this alteration had allowed the jaws to relapse into a condition approximating that in which they were when I first saw her.

Case II.—The second case was that of an elderly lady sent to me by Dr. Abbott Anderson. She sought his advice some months ago complaining of intense neuralgia, originating in and radiating from the right temporo-maxillary articulation. She was practically edentulous and unable to separate the jaws more than a quarter of an inch without causing severe attacks of neuralgic pain, darting over the whole of the right side of the face and temple, accompanied by spasmodic trismus of the masticatory muscles, injection of the conjunctiva and lachrymation of and from the eye of that side. Various local applications had been tried without more than temporary success, and I saw her in consultation with Dr. Abbott Anderson in order that a thorough examination of the mouth might be made and the existence of dental disease, if any, discovered. There was no obvious physical sign of disease in the joint. Nothing likely to cause neuralgia was found within the mouth, but the patient having for the purpose of examination been anæsthetized and the jaws somewhat forcibly separated, it was found that for some days subsequently her pain was sensibly relieved. I suggested that the case presented so many points of similarity to that I have already described that we could not do better than treat it similarly. The patient had, when I saw her, in her possession two small plates, one for each jaw, but had not lately worn them as they were not comfortable. They were small partial dentures, filling gaps in the front part of the mouth only. In this they contrasted strongly with the dentures in the former case. As in the first case, treatment gave immediate relief to the more urgent symptoms. Practically the neuralgia was cured and the patient enabled to perform the movements of mastication without discomfort or fear of sudden spasmodic pain.

Treatment.—The principle in treating these and similar cases is the adaptation of well-fitting dentures so adjusted as to keep at all times the jaws as far as possible in their normal relative position, by restoring the normal opposition of molar and bicuspid teeth. The chief difficulty, and one met with at the outset of the treatment, lies in obtaining accurate impressions of the jaws, for in the first case removal of the plates from the mouth set up pain

and tonic contractions of the maxillary masticatory muscles ; and in the second, the patient, in dread of causing onset of pain, would separate the jaws but to a very small extent, while any attempt to take models of the mouth resulted in causing muscular spasm.

Pathology.—Loss of grinding teeth, molars and bicuspid, lies at the root of the mischief. Directly consequent upon this loss occur degenerative changes in the masticatory muscles due to inaction ; then follows relaxation of ligaments about the joint ; the condyle of the jaw, and perhaps the interarticular fibrocartilage, slips when attempts are made to open the jaws, in this way pressing upon some of the nerve filaments derived from the auriculo-temporal and from the masseteric branch of the inferior maxillary nerves supplying the joint. Indirectly, these nerve filaments are connected with the seventh or facial nerve, the motor nerve of all the muscles of expression to the face. Branches from the auriculo-temporal nerve form one of the principal chains of communication between the fifth and seventh nerves. From the main trunk of the inferior division of the fifth nerve are given off branches to the masticatory muscles and from the ophthalmic division of the same nerve, those supplying the conjunctiva and lachrymal gland. After having been for some time in a state of chronic irritation, the sensory traces become traversed by exciting stimuli with extreme ease, and consequent discharges of neuralgic pain over the areas supplied by these nerves are frequent and violent. From the facts which have been mentioned, namely, the conditions which were observed before and after treatment, it may be deduced that the loss of normal relationship existing between the articular surfaces of the temporo-maxillary joint causes in a reflex manner both the paroxysmal pain in the sensory divisions of the fifth nerve and spasm of the muscles of the jaw. Two points favor this hypothesis : first, that the removal of the plates worn by my first patient caused immediate pain, replacement being followed by cessation of symptoms. Secondly, as already detailed, the relief gained by artificial restoration of the grinding teeth in the second case. I feel more than ever inclined to believe this to be the true explanation, for recently my first case came again under my observation complaining of slight recurrence of all symptoms described. Upon questioning her carefully, I found that her dentist in the country had for some reason altered one of her plates, reducing the molar and bicuspid opposition, and allowing the jaws to relapse into a condition approximating to that in which they were when I first saw her. I have only to add that six months have elapsed since treatment of the second case without the return of any untoward symptoms.

Dominion Dental Journal

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All Communications relating to the Business Department of the Journal must be addressed to DOMINION DENTAL JOURNAL, Room 97, Confederation Life Building, Toronto, Canada.

VOL. IX.

MARCH, 1897.

NO. 3.

"NOT WANTED."

With every first annual issue of the JOURNAL, we receive several compliments, and always from the same class. The publisher sends the January number free to every dentist in the Dominion and elsewhere, whose address he can obtain. It is quite amusing, yet in one sense a pitiable puerility, that the very same dentists, year after year, return the number, with the laconic inscription over their names, "Not wanted." Among our collection of curiosities of dental journalism, there is none which speaks more eloquently as to our ethical consistency, and the petty spirit of the class who do not want to have their professional meanness exposed. The many kind words from those who are not so thin-skinned and thick-skulled, is surely more than compensation. The few men who "do not want" the JOURNAL are the very men who most of all need it. We take their persistent insult to their own intelligence as a journalistic compliment. Yet we should gladly forgive their past, even if it could not be forgotten, if they realized that what they think they do not want, is exactly what they need in the worst way. They may yet be influenced by reason to admit, that doing our duty as journalists, in trying to keep them from making asses or rascals of themselves, we are doing them a fraternal, even a filial, kindness. But they are not willing to subscribe for their own reformation. And the publisher has no faith that they would reform if he even sent them the JOURNAL free.

TOO MUCH CROWNING.

An all-gold crown which is conspicuous is not only vulgar in appearance, but is one of the humiliating disfigurements of modern dentistry. It is a public exhibition of a dental reproach. It is not constructed upon the *ars celare artem* principle. If there were no other objections to the use of all-gold crowns, this would in itself be sufficient. There is no possible case in which this disfigurement cannot be avoided. The conspicuous gold crown should be relegated as the exclusive distinction of people of vain and vulgar taste, and dentists who run fads on the basis of pure finance. It is, moreover, the duty of the dentist to educate vulgar people in this direction; yet the operator who would be ashamed of his work if he put a white porcelain lateral beside a brown cuspid, does not seem to realize his inconsistency in making an all-gold crown neighbor to human enamel. In another way, there is too much crowning. Scores of fairly good molars are ground down, which should be filled. It is possible, with proper treatment and skill to restore such teeth to usefulness and natural occlusion by good amalgam, if not by gold, and in many cases amalgam is better than gold. The day is not far distant, we trust, when these gaudy and glittering defects of dentistry—fillings as well as crowns, and indeed the insertion of any metal in human teeth, will be looked upon with the same curiosity, as to-day we regard the use of human teeth and the ivory of the tusk of the elephant and hippopotamus for artificial substitutes.

OUR SOCIAL AND PROFESSIONAL CONDITION.

"What would our social and professional condition be to-day in Canada, had we not had the leavening influence and fearless criticisms of our only dental journal?" This is the question that comes to us on a post-card from one of the oldest and wisest of our Ontario practitioners. We do not wish to answer the question further than to say, that the social and professional condition of the profession in Canada to-day is not likely to be all that we desire if the gutter-dentists have their way. This journal hates the quack and the quack imitator as it hates the devil; and whenever one of them dies, it believes that birds of a feather are likely to flock together in the next world as well as in this. Looking back at the record of dental journalism since June, 1868, the editor feels that no one can accuse him of once wavering from the ethical principles announced at starting. The critics, who can easily find faults, should use a little introspection. Perhaps some of the

reasons for fault-finding lie at their own doors. The social and professional condition of a profession is not shaped to order by editors alone. Every member has a personal share, and merits either credit or discredit. Upon which horn of the dilemma do you sit?

EXAMINATIONS IN BRIDGE WORK.

A very unfair prominence and pre-eminence is given to practical crown and bridge work in examinations. The impostors who are prepared to crown and bridge roots and gaps of all sorts and conditions of disease and diagnostic uncertainty, are simply thieves. If the public choose to be swindled by such practice, it is no reason why honest men should lose their wits and get excited. A few failures will do a man irreparable harm. Our object, however, at present, is not to discuss the subject, but mainly to suggest, that too much time and practice on this branch is exacted from students going forward for their license. It would be wiser to emphasize the limitations of this department, and to discover by examination whether or not the candidate is a mere mechanic, who is prepared to tinker every root, however diseased beyond repair it may be, or whether he is intelligent and honest enough to know irreparable pathological conditions, which should lead him to avoid such practice. To know where and when not to use crown or bridge work, is as essential as to know how to do it.

Post-Card Dots.

8. Can you tell me anything about a custom in Japan of blackening the teeth? Is it a sign of mourning?

Quite the reverse. It is a sign of matrimony. By means of a corrosive preparation the teeth of the betrothed damsel are made as black as ink, and they retain their dark color during the whole lifetime of their owner, who, whenever she smiles, betrays to observers that she is married. Even when she is a widow no attempt is made to remove the matrimonial brand. I have just been informed by a Japanese friend that the custom is becoming obsolete.

9. What can I do with a lot of the old porcelain pivot teeth I have on hand? Wooden pivots were used for them.

You can roughen metal posts and vulcanize them into the holes or fuse them in with porcelain. The metal of an ordinary "safety-pin" is just as good for the purpose of a post as gold platina.

10. Why is the French language made compulsory in the matriculation examination in Quebec?

Because it is a living language of the Province, and as such entitled to just as much consideration as English. While by no means reflecting in the slightest on the necessity of a good knowledge of Latin and Greek, which, in a sense, are dead languages, the importance of knowing this one of the two living and official languages of the country cannot be gainsaid.

11. Is it true that there was a college in Wisconsin which granted the degree of D. D. S. to any applicant without attendance or examination, on the payment of \$12.00?

Yes. The Wisconsin Dental College, organized under the laws of the State in 1880. The Wisconsin Eclectic Medical College is still offering diplomas to physicians at "much reduced rates, \$35.00, all inclusive."

12. What became of Wells, the discoverer of ether as an anæsthetic? Also of Simpson?

After giving up dentistry on account of ill-health he dealt in pictures, and after many disappointments, committed suicide. Simpson was made a baronet; his bust was placed in Westminster Abbey, and a statue in Edinburgh. On this continent we prefer to honor our discoverers when they are dead. It costs more, but posthumous honor does not hurt human vanity.

A dental student wishes to correspond with a lady, with a view to matrimony when he gets his license. A lady who would consent to assist him through his career in the meantime preferred. Age or appearance no difficulty.

We would enjoy the fun of enabling this enterprising youth to attain his objects. Any woman, however, who would accommodate him would be so much like him that the law would probably prohibit the marriage on the grounds of joint idiocy.

Dominion Dental Journal

VOL. IX.

TORONTO, APRIL, 1897.

No. 4.

Original Communications

A PROFESSIONAL WARNING.*

By MARK G. MCELHINNEY, D.D.S., L.D.S., Ottawa, Ont.

The professions of medicine and dentistry are divided into two great classes, legitimate practitioners and quacks. Each of these professions, as the result of long experience, has accumulated a set of rules, written and unwritten, for the guidance of its members. These rules enjoin those lines of conduct that will conduce to the best interests of the practitioners, and ensure protection and the highest class of service to the public.

Those members of a profession who observe the spirit of these rules are looked upon as legitimate practitioners. Those who disregard the rules are called quacks. Nearly all start out in the legitimate line, but bad fortune, inability to face the long and weary struggle of practice building, bad counsel or example, desire to grow rich rapidly without considering the means, and many other causes weed out a percentage and send them forth to prey upon the world as quacks. Very few quacks succeed in making a brilliant success, for it requires a superlatively clever man to fool the public for any great length of time—the remainder of these sink lower and lower until they become mere street-corner fakirs. The quack holds the same relation to the legitimate practitioner that the tinker does to the skilled engineer, the scab to the honest skilled laborer, and the tramp to the reputable citizen. The quack is a professional tramp. The quack may be, in fact frequently is,

* Read before the Ottawa Dental Association, January 12th, 1897.

a skilful man; there have been Napoleonic fakirs in all lines of life, but his methods are not those best calculated to ensure the best welfare of his patients.

There are several reasons why itinerant practitioners, even if skilful, cannot give as good services as regular practitioners. The itinerant has no fixed place of business, no regularly equipped surgery and laboratory. He must put up with the various inconveniences and annoyances of temporary quarters, consequently his services must vary with his circumstances. The quack, in moving from place to place, trusts to his advertising for patronage and does not gain permanent patients, hence it matters little to him what may be the result of his work, for he has no reputation to preserve or character to protect. The quack often, nay, nearly always, lays claim to skill far beyond the range of the regular dentist or physician. A moment's reflection will show that a person possessing such superior skill and powers could attain fame and fortune legitimately in any great city and must be a fool to turn peddler and give his services at half price. The quack having obtained his dupes' money, wishes quickly to be rid of them, and does not care what future trouble may ensue, hence it is positively dangerous to engage the services of such totally irresponsible persons. A case in point—several years ago a dentist came to Ottawa equipped with a brass band, a variety troupe and electric light. He sold patent medicines and extracted teeth by the thousands. Between the distracting noise of the band and the effect of a powerful drug contained in a bulb on the handle of the forceps he actually extracted a large number of teeth in a painless manner. What was the result? A large proportion of the teeth were broken in the rapidity of the operation, the victim being hustled down too quickly to discover this or make protest. A large number of good teeth were sacrificed, the extraction of which was little short of criminal. The last and most serious result was the subsequent inflammation and sloughing caused by the drug or some of its constituents. There were many cases of serious inflammation and suppuration, and in at least one case the victim was in danger of losing the whole lower jaw through caries. Such are the unlovely results of such wholesale malpractice.

The claims of these men to superior skill and special knowledge are totally unfounded. Each and every dentist in Ontario must attend the Royal College of Dental Surgeons for the full course and must pass the prescribed examinations. The opportunities for instruction are equally open to every student. Every effort is made by the professors to obtain the very latest methods and most modern appliances, and no improvement can exist for any length of time without its advent becoming a matter of discussion in the dental journals, which are widely circulated and read by professors,

students and practitioners. There are no trade secrets in dentistry. Individual variations in method are many, and of these any practitioner may choose that best fitted to his requirements, but the system of modern dentistry in all its intricacy is the common property of the dental profession. Our surgeries and laboratories are ever open to our brother practitioners, and at our meetings together we exchange and discuss our ideas and opinions, and above all, what characterizes most dentists as men of liberal and scientific spirit, is that any one who makes an improvement or discusses a new fact immediately calls his brethren together and gives them the benefit of his good fortune. Is it reasonable to believe that an itinerant tooth-puller could by any possibility possess knowledge that could remain hidden from a numerous and educated profession that singly and collectively is continually striving for higher and better attainments ?

The claims of the quack are based as much upon his own ignorance as upon his knowledge of the gullibility of human nature. It was not long ago that a young man called at the writer's surgery and endeavored to sell a secret method in connection with crown and bridge work. He was surprised to find that the writer had been shown the same method by another older practitioner in this city, and that in all probability the method is in the possession of almost every member of the profession to-day. In addition, the method is one of minor importance, suited only to occasional cases and more a trick of manipulation than any real improvement in result.

The possession of the degree in dentistry is sufficient evidence of average ability, which is all that average recompense calls for. It may be held that the regular practitioner is afraid that he will lose money if the public patronize itinerant operators. There is also something in this, for the resident practitioner pays rent and taxes, and otherwise contributes to the general prosperity of the community, and the better the public supports him the better services he can render. Every professional man spends much time and money in adding to his knowledge regarding difficult points in practice, and frequently on an especially difficult case he may spend ten times as much as that case can repay. The writer is aware of more than one case where the practitioner, for the sake of the patient, for the sake of his own reputation, and for his own professional satisfaction, brought it to a successful termination at an expense not only far beyond anything received in fees, but owing to fewness of such cases beyond any possibility of future remuneration.

It has been charged that we labor only for the almighty dollar. Were it not for necessity it is probable that many of us would not be in the profession ; but once in, it is a poor and mean individual

who does not develop some interest in the welfare and advancement of his chosen calling. Cheapness is the great bait held out by quackery. Mean and ignorant persons imagine that they have done a smart thing in saving a few dollars in medical fees, even if they have, by resorting to quackery, lost the life of a wife or child. It is the same in dentistry. The same people will stop at half a dollar in the price of a filling, even when it may mean the loss of a tooth which is a vital necessity to health and comfort. Even if the quack rendered equally efficient services, which cannot for a moment be admitted, it is a manifest injustice to extend to him the patronage that rightly belongs to the resident practitioners, for to them all other members of the community are more or less indirectly indebted as members of the same social arrangement.

In some of the smaller towns and villages where the population of each is not sufficient to support a resident dentist, it is necessary for one to visit them at intervals, but this practitioner always has an established headquarters and does not come under the definition of a quack. Some of the most reliable men in the profession have practices of this description. They have a clientele in each place, and are as careful of their professional reputation as any of the resident dentists of a large city. The advent of a quack always results in the regular dentists being crowded by a lot of difficult and unsatisfactory cases for which equivalent remuneration is very difficult to obtain. The cases consist of misfitting artificial teeth, uncleanly crowns, roots left in during careless extraction, inflammation from use of powerful drugs, and sometimes even fracture of the jaw from brutal manipulation, and blood-poisoning from the use of uncleaned instruments. Imagine for a moment the extraction of hundreds of teeth in an evening without even wiping the forceps, as the writer has actually seen take place. What a splendid opportunity for the wholesale dissemination of syphilis and kindred diseases. This sort of thing is criminal, and should entitle the perpetrator to a term of imprisonment that would teach him not to indulge in malpractice. The serious results that may follow the use of unclean surgical instruments are not half appreciated by the laity. Ask any physician, and he will say that since the advent of antiseptic surgery the mortality from surgical operations has decreased to an astonishing degree.

It is a fact that the existence of syphilitic virus in the first of one hundred patients operated upon consecutively with unclean forceps could entail life-long misery upon the other ninety-nine, not to speak of transmitted disease through countless generations of their posterity. The dentist who for a greatly reduced fee is compelled to handle too many victims in a given time to make a living, has not time left to attend to such a small, though important,

matter as the cleansing of instruments. He is forced to leave the debris, and perhaps deadly poison, of the last operation in the mouth of the patient next following.

There is no doubt that a restaurant keeper who took no time to wash dishes and table linen could provide meals for a few cents less, but how many customers would he get even in the slums? Yet in a matter of a thousand times more importance some people, for that few cents, will run the risk of misery and even death itself.

A great many would-be wise persons refuse to be warned that the services of the cheap-john are most expensive in the end, and like the people described in the legend of the Noachian deluge, keep right on to destruction. Be that as it may, the profession, in sounding many a note of warning, has the satisfaction of knowing that it has, as far as lay in its power, done its duty.

AMBIDEXTERITY.

By HERBERT LAKE, L.D.S., Mitchell, Ont.

Ambidexterity: a term applied when the movements and sensations of the limbs on one side of the body are under equal control and command with those on the opposite side. There seems to be an unwritten and yet unalterable law to the effect that man should use one hand rather than the other as the instrument of his will. That is to say, one of his hands is the active or controlling member in all that he does.

Right-handedness means, the right hand is the guiding hand, while in work the left one assists. The union is inseparable. In all work which requires both hands the left does as much work as the right, but only as an assistant, and that involuntarily. The active hand is always nearest the work. The baseball player who bats right-handed holds the bat over his right shoulder, has his right hand next the end with which he hits the ball.

The foregoing may also be said of a left-handed person. There are ideas prevalent as to the cause of the majority of about fifty right-handed persons to one left-handed. Some writers affirm that it is a matter of training; that to the untrained child there is no distinction, and as the brain develops, the powers of imitation, together with the training of nurse and mother, bring about the result. There is much in this story. Take a child before the age of training can begin; hold before it a simple toy. Which hand will be reached out to grasp it? As often the one as the other. Further, say for argument's sake that the child is developing left-

handedness. Imprison that hand, and see if the child will not adopt the usage of the other. Naturally it will, all theories to the contrary. Set free the imprisoned hand, and what is the result? In one case which came under the writer's notice, the happy faculty of being ambidextrous.

There are many degrees and shades of right and left-handedness prevalent in adult life. There are many who are ambidextrous naturally—many to certain degrees showing the natural preference for either the one or the other hand, and yet are indifferent even to preferring the alternate use of both hands. They throw a ball right-handed, bat it left-handed, spring into a race from the left foot, but in the running jump may leap from the right foot. The lower limbs are less closely controlled by the will than the upper. Their movements are more often involuntary, though the moment they are in such a position as to change them from their natural bent the brain is at once called in for a decision. Some writers have attempted to prove that the right hand is the one intended by the economy to be the useful hand, and have gone so far as to say that left-handedness is indicative of a lower degree of intelligence. The idea is combatted by all the observations and tests one can bring to bear on the subject.

We know that where there is a choice of two directions of growth or movement in plants or animals without apparent advantage either way, a preference is shown for the one over the other. For example, among the heavenly bodies the planets and their accompanying satellites follow a similar law; all accompany the earth and its moon save the moons of Uranus, which circle their primate an opposite way. The woodbine twines in its own direction, possibly from left to right, but the climbing hop-vines may reverse that and run from right to left. The grain of the rock-elm is always from left to right, but the ironwood of the northern zones grains in the opposite direction. The squirrel will turn to the right as he spirals up a tree, unless there is danger in that direction; but his cousin the chipmunk almost invariably seeks the opposite course. When the question of moral intelligence is mooted in this connection, what can be said of the coon, who turns neither to the right nor left as he shins up out of danger, his heart full of guile and his stomach full of stolen property?

Why does man use his right hand more than his left? Can the arrangement of the internal organs be made to account for it? The heart is lying obliquely in the left side. The organs of respiration differ in size and weight. The blood vessels in the upper part of the body are unsymmetrically arranged. More than one scientist has undertaken to prove this a cause for the action, though it is hard to see that, separate from the brain, any of the organs have aught to do with it. Now, the left side of the brain controls the

limbs on the right side, and *vice versa*. Does anyone venture to say that the left brain is greater in size, weighs heavier, or contains more matter than the right? Popular usage, early training and a predisposition to the right hand accounts for the majority of right-handed persons. It is a fact, however, which cannot be gainsaid, observation has established, and tests have proven, that a left-handed person is with that left hand more skilful, more accurate, more steady than is a right-handed one. It is also a fact that a left-handed person is ambidextrous to a greater extent than is a right-handed one. Popular prejudice is against the left hand, and the right is trained to dexterity. Manufacturers of instruments, of utensils, etc., do not allow for left-handedness, and as a result the unfortunates have either to work under a handicap or adapt themselves to the circumstances.

What is the benefit to a dental operator in being ambidextrous? What operations has he to perform in which he would be helped by his ability to use either hand with equal skill? The statement is ventured, and though discussable, is nevertheless made, that instead of being of use ambidexterity would be a hindrance. Time is money to the dentist, and the time lost in selecting instruments, shifting positions, etc., would not suffice to recompense for the advantage gained by the use of the opposite hand. Again, the servant may make a good master, but the master never makes a good servant. The right hand of the operator is the directing, the motive hand. The left is the assistant. A gold filling is in progress. While the right hand is placing the pellets in position and guiding the mallet, the left is adjusting the rubber-dam, managing the saliva pump, holding the mouth mirror, etc.—a deal busier than the right hand, but still occupying a minor position. Now, let us change places. The left hand directs the work, and training and practice will insure a degree of success unsuspected, but no amount of will-power, practice or determination will enable the operator to perform with the right hand the work of assistance so admirably and yet involuntarily undertaken by the left. You may make the left hand a successful director, but never will the right occupy a subservient position.

As one who has practised ambidexterity with the desire to benefit thereby, let me advise leaving it alone. The results are no reward for the time spent.

THE most barbarous method of dentistry in the world is that practised by the Kaffirs. The Kaffir dentist places his patient on the ground, and four men hold him down. Then the operator takes a piece of sharpened ivory, steel or wood, and hacks away on the gums until the tooth is extracted.

TWO INTERESTING CASES OF CAPPED PULPS.

By R. E. SPARKS, M.D., D.D.S., Kingston, Ont.

My experience of capping exposed pulps has not been of the most encouraging character. After practising it for twenty years, in all cases where there seemed to be any probability of success, I am led to wonder who extracts or treats the failures of those who report almost universal success.

I think I get a fair share of cases; and, as I said before, I cap all cases where there promises to be a probability of success. I have tried all methods that I have read of, or heard advocated. While I recognize the advantage of a tooth having a living pulp over one from which the pulp has been removed, I must confess that, from my experience, I feel much more confident of success when I have made an application to devitalize an exposed pulp than when I have capped it.

Two cases came under my notice recently, which illustrates this:

Case 1. Miss M., aged about twelve, came to have her teeth filled, on February 27th, 1890. Among other cavities was one on the anterior surface of the left lateral incisor. It was only an ordinary sized cavity, and had never given any trouble. When I removed the decay near the cutting edge, I was surprised to find I had made a slight exposure of the pulp. I capped it. It gave no trouble. On July 8th, 1891, I refilled it with cement. On March 9th, 1894, I refilled it with gold, everything being, apparently, in a satisfactory condition. Until about the new year, 1897, I would have reported this an unqualified success. At about that date the young lady came to my office complaining of severe pain in that tooth. I found the gum swollen above it; the tooth somewhat loose. The color had remained remarkably good. The characteristic opacity was present, however, upon close inspection. This, with the other symptoms, convinced me that my grand success was, as in many other cases, an utter failure. Upon opening into the pulp chamber, pus boiled out profusely. After thoroughly cleansing and a few daily antiseptic treatments, the root was packed with cotton, saturated with eucalyptol and closed up until the 16th, when it was refilled permanently, and, so far, is perfectly comfortable.

Case 2. Dr. R., aged about 65, came complaining that between his first and second molars, on the left side of the lower jaw, food would wedge, and was difficult to remove. Upon examination I found the gum receded considerably from his teeth, making large spaces between them. In the space referred to, I found a large

cavity on the posterior surface of the first molar, about the neck, opening out well to the lingual side. I removed the decay from this opening. At one point it was very sensitive. I suspected that the decay had reached the pulp, but as the tooth had caused him no pain before, I filled the cavity with cement. About two months afterwards he reported that from the time the tooth was filled it was sensitive to thermal changes ; that it had become so much so that he had no comfort with his meals. It pained when he went out doors and again when he came in. I was convinced that the pulp must be devitalized. I opened through the grinding surface ; a slight shock was caused when the drill opened into the pulp chamber. The main body of the pulp was removed without pain, and the opening enlarged. I found a little nerve matter not entirely dead in the root canals. I dropped a drop of the saturated solution of cocaine in carbolic acid into the pulp chamber and after a little patient working with a broach was enabled to remove the balance of the nerves. After drying the canals with cotton on broaches, followed by hot air, I swabbed them out with eucalyptol, and filled with chloropercha and gutta percha points, at the same filling. This was some months since, and the doctor reports having had no trouble whatever since the operation.

INCIDENTS IN OFFICE PRACTICE.

By G. V. N. RELYEA, L.D.S., Oswego, N.Y.

Stratagem at times is as necessary in dentistry as in war. A patient called, when the following colloquy ensued: "Some twelve or fourteen years since you filled these front teeth with gold, and they are so nice that I will have nothing but gold in my mouth. My eye tooth is decayed, and if you think it will reach the nerve I will not have it done, but instead will have it extracted. You once killed a nerve for me, and it almost killed me."

I examined the tooth and assured her that it was not very bad, it would not reach the nerve. I commenced to excavate, and doing it carefully had it, as I supposed, ready for the filling. On close examination, however, I saw the pulp shine through the thin wall and at once abandoned the idea of filling with gold. In my palmy days, when I was ambitious, I would have considered this a grand opportuning for capping. In this case there were potent reasons for not adopting it, and in a future article I will give my experience about capping ; when and why—when not and why. To tell her the real condition would have involved objections, explanations, etc. In such a case I retire for deliberation, and in this

instance came to the conclusion to ask for time. The gums had been somewhat wounded and I advised her to defer the operation and let the gums heal. Then I applied my devitalizer and covered it securely with a four per cent. cocaine. In two days I was to see her again. At the next sitting she reported no pain. On examination I found the pulp devitalized and no inflammation. Quietly and without creating any suspicion I gently removed the pulp almost to the apex, then forced pure wood creasote up and advised a temporary filling, and she could have a gold-filling later. When next in the chair I showed her the filling, which was white amalgam, and said why not leave it as it is, it does not show from the outside and it will save you several dollars, to which she gladly consented. I then told her about my destroying the nerve, removing it entire unbeknown to her, and such a blank, disappointed expression you can scarcely imagine. I have written this for the benefit of young operators.

A HINT ON EXTRACTING.

By E. A. RANDALL, D.D.S., Truro, N.S.

I have often seen an operator's face and shirt front bespattered with blood, from extracting teeth, while the patient was under an anæsthetic. This is unnecessary. I use nitrous oxide as a general anæsthetic. The moment that the inhaler is taken from the face I push a small sponge into the mouth; this prevents roots, which I may drop in the mouth, from being drawn back into the trachea, and absorbs the blood which would otherwise be swallowed or blown out in the operator's face, and does not prevent breathing, as the patient breathes through the nose.

SOLID GOLD CROWN.

By R. E. SPARKS, M.D., D.D.S., L.D.S., Kingston, Ont.

To make a solid gold crown, stamp cusps of thin soft platina and trim to size. Proceed to articulate. It may be dinged or bent to suit the case. Now melt it full of gold scrap of any desired grade. It will now be found that while the platina has retained the shape of the cusps its color has almost entirely disappeared. If any remain and is likely to be exposed it may be removed in the finishing process.

TO OPEN PULP CHAMBERS OF TEETH AFFECTED WITH PERICEMENTITIS.

By R. E. SPARKS, M.D., D.D.S., Kingston, Ont.

We often have to open up teeth which are very tender to the touch. The pressure necessary to make a steel drill enter the outer layer of enamel, together with the shocks caused by the revolutions of the flat-sided drill upon the uneven surface of the tooth, causes excruciating pain. To avoid this, grind, with a small stone, a pit at the point at which you wish to enter the tooth. The drill will then run smoothly and penetrate much more easily. When desiring to open on the palatine surface of the incisors or canines, after grinding the pit, take an inverted cone bur, a little larger than the drill intended to be used, and cut into the pit the depth of its diameter. This gives a flat surface for the point of the drill to start into, and avoids the shocks before spoken of. Keep the point of the drill well lubricated with oil of turpentine or glycerine.

IS A BUSINESS EDUCATION NOT NECESSARY TO THE PROFESSIONAL AS WELL AS TO THE COMMERCIAL MAN?*

By J. G. GARDNER, L.D.S., D.D.S., Montreal, Que.

If I were asked this question I would immediately answer "Yes, but the professional man need not have such an extreme business education as the man engaged in commercial pursuits. Before entering into the reasons why he should have this education, I will give my reasons for choosing this as the subject of my paper.

One evening on entering the café for dinner I noticed seated at one of the tables one of our medical specialists; he motioned me to a seat beside him and told me during the course of our conversation that he had rather a perplexing subject submitted to him for his judgment. The question was this:

He had a nephew whom it was decided should have a medical education, but it was decided that he should first receive a preliminary training, and it was what this preliminary training should consist of that was the perplexing question. The parents thought that an arts course would be best, and as this medical man is a graduate in arts his opinion was asked.

* Read before Montreal Dental Club.

He told me that if anything happened which would prevent him following his profession he did not think his arts course would prove of much assistance in securing him a position where would be much remuneration.

While admitting that the arts course was a good thing, enabling him to follow his medical studies with greater ease than if he had not pursued this preliminary course, yet he was inclined to advise going still further by giving the boy a business education in some first-class commercial house or even to go so far as to have him learn a trade and then take the arts course, and lastly the medical course.

He asked me if I would give him my opinion, which I did, and which I advised should consist of a business education, the arts course, and then the medical course, and now I will give my reason for advising this course. 1st. The business education. When we consider the incomes of the members of the dental profession and how little they can show for it, either in the amount at their credit at the bank or as property holders, it should strike us that there is something wrong, and if we decide that such is the case can it not be remedied?

I am satisfied that if the profession (*i.e.*, the members of) received a business education they (not all, perhaps,) would be able at the end of a few years' practice to sign their names to a cheque for an amount in the four figures at least. And is it not becoming more necessary every year that we should make provision for the future when we consider the number of our patients who are constantly reminding us that Dr. So-and-so is too old, is not progressing with the times, has to wear double glasses as he is losing his eyesight, and such other foolish comments, which, though we know are not true or perhaps not detrimental though true? Yet it is the public upon which he depends for his income, and when they form these opinions it is a case of forced retirement which stares him in the face and nothing we could say or do could prevent it. When we consider that members of our profession who are not over fifty years of age are spoken of as too old it points out to us what we may expect, and we should govern ourselves accordingly.

But how govern ourselves accordingly, you will ask, and to this I will reply, We will take the average age at graduation at twenty-five, a pretty high average, but it will suffice for an example, the great majority of our young dentists would have no difficulty in saving at the very least two hundred dollars a year were they only to practise economy; if they were to save this sum each year until their fiftieth year (of age) they would have a capital of \$9,587.58, allowing interest at five per cent. per annum and compounding it. This rate I do not think I have placed too high, as I myself receive seven per cent. interest and a bonus of one per cent. on certain securities I hold.

Take a man who has saved this small sum annually out of his income and who has placed it at five per cent., in his fiftieth year (of age) he will be receiving interest on the capital amounting to \$447.03, not a bad help by any means. When we look around us and see men such as Atkinson, Devinelle, and others too numerous to mention who have enjoyed such large practices and such enormous incomes and yet who had so little of this world's wealth in their old days, it should open our eyes to the necessity of imparting to the rising generation a good business as well as a good professional education.

But the question arises, all are not able to give their sons a business as well as a professional education. This might be overcome to some extent at least by the giving in our colleges by a professional man with a business training a series of lectures on how to conduct a practice on business principles (not a dental parlor one, however).

Gentlemen, ours is a trying profession in more ways than one, as you are all aware, and we should not wait for the public's gentle hint that we had better retire as we are too old, but rather we should endeavor to place ourselves in such a position that one can retire gracefully and enjoy our old days in pleasure, peace and comfort.

Do not for a moment think that I would advise retirement to a man who had only managed to save \$200 per annum, but as a portion of the public deem him too old at fifty to attend to them, he must content himself with a much smaller income from his practice than he enjoyed in his younger and, will we say, palmier days, therefore this little income of about \$447 per year would help swell his income from his practice so that he would not feel the decrease so keenly as he would if he had not managed to save this amount each year.

But there are a large number, and I may say the majority, who are able (if they but make up their minds to do so) to save \$500, and some over \$1,000 or \$2,000 per year, without stinting themselves to any extent.

Those who can save \$500 per annum under the same conditions as those saving \$200 per annum will, at the expiry of the same time, have a capital of \$23,885.18, and a yearly income from that capital amounting to \$1,113.58, so you see that a man, even if he has no business training, but is economical, and uses what business ability nature endowed him with, can manage to accumulate a little fortune.

Of course, with a business education he would be in a position to place his capital to better advantage and thereby increase it to a greater extent.

A professional man, and those of the dental profession more

particularly, should keep a set of books so that they can tell at a glance what amount of work they have done, how much they have collected, what they have lost in bad debts, what it has cost them for instruments, materials, and any other incidental expenses connected with their office or laboratory; they would then know their net income to the cent and not have to guess at it as so many do who do not keep account of their earnings, but simply put any money that comes in into their pocket, and it goes out as easily, and then they wonder where all their money goes to. Would it not give more satisfaction (for the few minutes it would take each day to post the books) to know exactly where the money had gone, and this can only be done by keeping a set of books.

It has been said, and truly, that a dentist cannot make a fortune out of his practice, but we must remember that we have not invested the capital that business men who make fortunes have; we hear of men making fortunes in the commercial world who have no capital, we also hear of men who pick up large nuggets of gold, they are rare—one is about as rare as the other.

Gentlemen, it takes money to make money, and if we have money (capital) we can make money, but if we have a business education as well, we can probably make more.

We are not the worst off of the different professions and callings in life, as we at least have the opportunity, if we avail ourselves of it, of becoming, not millionaires, but independent men, which is by far the happier existence.

My earnest wish, in closing this part of my subject, is that we may all become the latter, and give those who are to follow us *a business education*.

Although what is to follow may be foreign to the subject, still I feel that the paper would not be complete did I not touch lightly on the remaining parts of the course I advise.

2nd. An arts course. Why, you say, is an arts course necessary to a professional man? In reply I would say that it better fits him for the medical, dental, or other education which is to follow; he learns more rapidly, with more ease, and has many more advantages over his less favored brother student. But it is in his later life, when he gets into practice, that he has the greatest advantage, as he can converse more freely and on more varied subjects than the great majority of those who have been less favored; he also takes more pleasure in reading and covers a wider field, not contenting himself with reading only a few of the journals published in the interests of the profession of which he is a member.

3rd. The professional education. Should it be the desire to enter the dental profession, the system we have adopted is probably the best in the world, as by it he receives both an office and college training.

ORAL SURGERY: THEORY AND RESULTS.*

By G. LENOX CURTIS, M.D.

Theories in surgery, as in finance or government, when founded on insufficient data, are apt to be exploded when an attempt is made to demonstrate their real worth by practical test. For it is undeniable that results are the true criteria of the value of work. A theory which will not at all times bear this test falls.

While general surgery and many of its special branches have been brought to a high degree of perfection, where theory and result accord beautifully, there are departments of the great work of no less importance than the fields, now cultivated by the medical profession, which are utterly neglected in the teachings of the medical institutions and in the practice of medical men. The physician considers it beneath his dignity to investigate the mouth as an indicator or cause of disease further than to look at the tongue. He will not refer to the teeth lest he may be classed with the "dentists." Yet the mouth, which is the gateway to the alimentary tract, the portal through which passes the food which nourishes the body, would seem to demand his first and closest consideration.

The completeness of the lack of knowledge on the part of the average physician and surgeon, concerning diseases attendant upon or following affections of the teeth, of the effects, near and remote, which such affections may cause in the organism, is appalling. Many times their patients suffer untold agony or endure prolonged illness because of the doctor's ignorance upon these subjects, which should be among the fundamentals. For which, if not all, of this the medical institutions of learning are responsible. In the curricula of many of these the teeth, in spite of all the attention that is given to them and their diseases, let alone their anatomical and nervous relations to the remainder of the economy, might well be foreign bodies. In view of all this, it may not be an unprofitable investment of the time to devote twenty minutes to the discussion of a few reports from a plain record of facts.

Mr. A., aged twenty-eight years (who, up to July 1st, 1894, had been in good health, well nourished, and above the average in physical development), in the latter part of March experienced trouble in the eruption of the right inferior wisdom-tooth.

Examination by his dentist revealed inflammation of the gums surrounding an impacted wisdom-tooth, but not sufficiently developed to lead him to do anything for relief of patient. The first

* Read before Canadian Medical Association.

and second molars were in position. Dismissed with advice if trouble continued to call again. Soreness increased until May, when the gum over the tooth was lanced and painted with tincture of iodine. This was several times repeated until June 1st, when an abscess was formed. This also was lanced and treated in like manner until July 1st, when the suffering of the patient caused the dentist to advise the extraction of the tooth, and the address of a professional extractor, whose knowledge of surgery was evidently based on theory, was given. Under nitrous oxide an attempt was made to extract the tooth, which resulted in the removal of the alveolar process on the lingual surface. When the patient recovered consciousness he was assured that the tooth had been fully extracted, and was shown a piece of bone of considerable size that had been taken out. He experienced excessive pain and discomfort from the operation, and there was great soreness, due to the lacerated tissue. Complaining of this, the extractor said it was of no importance, he would be all right in a day or two, not even prescribing a disinfectant mouth wash. Patient noticed considerable excitement on the part of the dentist and his assistant, and recalled hearing, while in a semi-conscious condition, the associate express surprise, which led him to believe that the operation was out of the usual run. For several days the patient was confined to his room, and unable to lie down because of the severe soreness of a bruised back. His jaws became rigid and closed, necessitating the use of a fluid diet. Face was badly swollen and pain increased hourly. On the second day following the operation pus began to flow from the mouth, and the swelling was so pronounced that he again consulted the extractor, who laid the trouble to cold and malaria, and considered the operation a perfect success.

After a week of intense suffering and extreme weakness for want of food, he consulted his family physician, who was unable to relieve his suffering, and advised him to see a general surgeon, who in turn told him he was a subject for the dentist, and that he knew nothing of such diseases. Another surgeon, placing his finger along the inside of the cheek back to the upper wisdom-tooth, which had been fractured during the attempt to extract the wisdom-tooth, said that the whole trouble was there, and again he was referred to the dentist, who ridiculed and dismissed him as before. There was excruciating pain in the region of the right tonsil, which was relieved on opening of abscess. A physician was then called, who admitted his inability to treat the case, and turned him over to a young man with a recent hospital experience, in whose hands he got his first relief.

Pus had burrowed through and formed a large cheek abscess. The patient was now very weak and debilitated, with constant

discharge of pus from the mouth. An opening was made through the face in the region of the malar bone, which was syringed daily. Under this treatment the patient improved and the swelling subsided, leaving an opening below and back of the angle of the inferior maxillæ, which was caused by the pus. Through the poison in his system the patient was in so precarious a condition that a consultation was held, and he was advised to go to New York for treatment. With his physician he appeared in my office on December 7th.

Examination revealed a large indurated mass just below the jaw on the right side. Very offensive pus was discharging from the opening before referred to. The introduction of a probe revealed extensive destruction of tissue below the jaw and extending back to the tonsil, where a hardened substance about an inch in size was outlined. Had not the history of the extraction been so definite, I would have been led to believe that a tooth was lodged there; but we concluded it was a fragment of the alveolar process covered with fibrous tissue, which his physician had been trying to dissolve with medicine given internally. The patient was able to separate his teeth one-quarter of an inch, which allowed me to examine the wound where the tooth had been extracted. Pus was exuding freely from this wound of the same offensive character that predominated. Passing a probe into the wound I found that the alveolar process had been fractured, and that a large opening led to the hardened mass external to the tonsil. The patient was in constant pain, confined largely to the right side of the face, very anæmic and nervous, and health completely broken. An immediate operation was advised. Under an anæsthetic the wound where the tooth had been was enlarged, rough bone due to the fracture of alveolar process and suppurating tissue leading to the hardened mass was curetted, allowing more complete examination for the cause of the trouble, when a steel probe readily detected enamel. I passed an instrument around and behind the tonsil, and gradually dislodged and removed a wisdom-tooth, upon sight of which his physician said, "It would take me a long time to dissolve that with any agent known to medicine."

The abscess under the jaw, which involved the entire cellular tissue, was thoroughly curetted, leaving a depression about two by three inches in size with exceedingly thin skin. Packed with gauze and allowed the wound to granulate from bottom. No pus from wound near the tonsil after the operation, but some in outside wound until it was curetted.

Patient began at once to improve on antipyemic treatment and nourishing diet. Several days after the operation he complained of severe pain extending along the right side of the face. Examin-

ation of the superior third molar revealed an exposed pulp, following the extraction of which there has been no return. In three weeks the patient was dismissed, and with no deformity from the operation and no return of trouble.

It seems reasonable to me that when the dentist attempted to extract the tooth, instead of grasping it he bore down upon its masticating surface with the point of the forceps, forcing the tooth through the alveolar process, which was fractured, and crowded the tooth behind the tonsil, where it was found embedded. I am told by the patient that since the extractor learned of the removal of the tooth he stated that he thought the patient had swallowed it, and did not dare to acknowledge the facts, preferring to cover up the wrong-doing by saying he had extracted the tooth and it had been lost among others in the cuspidor.

Mr. B., aged fifty-five years, suffered from neuralgia, which the dentist thought was due to abscess of the inferior left central incisor, and inferior left molar, which were pulpless. These teeth had been under treatment for some time, but resisted all efforts to be cured. On examination the upper arch was found edentulous, the patient wearing artificial teeth. Examination of diseased inferior incisor revealed a canal thoroughly opened, and a fistulous opening through the gum at the end of the root, through which a probe showed extensive absorption of the bone. The left lateral and cuspid teeth were found to contain decomposed pulps, and a probe could be passed from the fistula back to the bicuspid below the ends of the roots. The molars were also abscessed, with a fistulous opening through the gum on the lingual surface. The posterior canal was opened through the apex, and the anterior buccal canal was partially entered and plugged with bamboo. Inferior wisdom tooth lost. On November 27th, 1894, the central incisor canals were cleansed, sterilized, and filled to the apex with chloropercha.

The canal in the lateral incisor was opened freely and drilled nearly to the apex, but I was unable to get nearer than a fraction of one-sixteenth of an inch from the apex. Sterilized and filled with chloropercha. Patient was referred to dentist for removal of gold crown from cuspid root, which was abscessed, and to report on Saturday. On that day examination revealed the removal of crown; the canal of the cuspid was more fully opened into and dressed with creosote.

On December 1st, canal of cuspid was more fully opened and a probe passed beyond the apex. Canals sterilized and filled with chloropercha, some of which oozed out through the apical foramen. Cocaine was injected into the gum and alveolotomy performed. Chloropercha oozed out through the wound. Cavity in alveolar process around cuspid and incisors burred and curetted. Debris

washed out and wound sterilized. December 3rd, the gums over the cuspid found considerably swollen. Wound opened with probe and tincture of iodine injected. December 5th, gums found less swollen and less inflamed. External application of iodine. Anterior buccal canal of molar opened to apex; also posterior canal more freely opened to apex. Search for lingual canals, from which the abscess started, resulted more favorably after drilling considerable dentine away in the floor of the pulp-chamber. Canals found to be small and almost closed by deposit of secondary dentine, but larger upon opening into them. Both were opened to the apex so that a delicate probe passed beyond. All four canals were flooded with carbolic acid; ropes of cotton were packed in and sealed for the purpose of disinfection. Two hours' time was occupied in opening these canals. The following day the canals were packed with iodoform. No unusual disturbance around tooth. December 7th, all signs of inflammation had subsided and the teeth were entirely comfortable. The canals were dried and filled with chloropercha, which was forced through the apical foramen of the distal canals, and oozed through the fistula in the gum. The floor of the pulp-chamber was carefully lined with gutta-percha and the cavity filled with cotton. Case referred to dentist for filling. Under cocaine alveolotomy was performed abscess and debris burred and curetted; wound washed out with electrozone. Wound dressed daily for several days with disinfectant and tincture of iodine. Patient complained all the time of severe neuralgic pain in the left side of face, more especially when tired or at night. I directed the dentist's attention to second left inferior molar, which was very sensitive, owing to abrasion and its having been ground down so as to make the teeth on the plate above occlude properly. Advised to look for irritation of pulp. This advice was not considered good to the extent of investigation. December 19th, after an exceedingly restless and painful night, patient consulted family physician, who bitterly censured the advice and operations of the dentist and of myself, and demanded that he immediately go to a professional extractor and have the teeth drawn, leaving the posterior molar untouched. It was no easy task for me to dissuade the patient from acting on the physician's advice. Again I repeated the necessity of care of back molar; I also opened through the gum and curetted around the anterior buccal root of the first molar with a view to blood-letting and to relieve light congestion around tooth, and also in the pulp of back molar. The pain continued, and the dentist reluctantly saw the wisdom of opening into the second molar, which revealed four pulp-stones about the size of a pin's head as the cause of the trouble, on the removal of which, along with the entire pulp, all pain disappeared and the patient was rendered

comfortable. Since this treatment patient has enjoyed best of health.

Mr. D., aged thirty-four. December 18th, 1894. For ten years or more had dull pain in upper right half of face, sometimes extending to side of head, with soreness in upper jaw below malar bone. About seven years prior he had the first superior molar extracted, since when he noticed an opening through the gum in the neighborhood of the affected tooth, through which pus discharged. All these years he at times had very heavy dull feeling in the right side of the face, in the nose, and under the eye, which would leave the eyeballs sore and tender. A pain sometimes ran down the right arm and side of the chest, resembling that of rheumatism. For one year he had continual sharp pain in the left side of the face and in the eye, which on any quick movement of head or an attempt to read rendered him dizzy so he would stagger. When apparently free from pain a quick turn of the head would cause it to reappear. Neither physician nor dentist could point out the cause of the trouble, but advised the extraction of the second bicuspid on the affected side, where the pain centered, and an attempt to do so resulted in the fracture of the root, when, in order to get the pieces, nearly the entire alveolar process surrounding it was cut away. The wound was a long time in healing, and the neuralgic pains continued just the same. One of the surgeons whom he consulted gave him a placebo, from which I inferred, as did the patient, that the surgeon took his case to be one of hypochondriasis.

He appeared at my office with the history given above. Examination of the right side revealed a fistulous opening posterior to the second bicuspid, which would be exceedingly difficult for inexperienced eyes to detect, as there was no inflammation or hypertrophy surrounding it. A delicate probe was readily passed through it and into the antrum. The removal of the probe was followed by a straw-colored fluid, leading me to the belief that bone disease existed. I found that all the alveolar process anterior to the second molar roots and first bicuspid, save sufficient to hold that tooth in position, had been destroyed. The destruction extending to the lower border of the malar bone and floor of antrum. Within that area it was completely gone. The hard palate opposite the extracted tooth was necrosed for half an inch and a sequestrum about one-quarter of an inch in width, held and supported by a narrow neck, was forming at the line of demarcation. The second bicuspid contained a putrescent pulp, which when opened was exceedingly offensive. I concluded cause sufficient for disturbance on the right side of the face had been detected. The symptoms on the left side were then looked into. The left half of the upper lip was swollen and inflamed, especially

so at night, bothering him in talking and eating. A notable condition in the expression of that half of the face was the want of normal fullness showing a long-continued irritation of the nerves which supplied the muscles, which had resulted in their being atrophied, save those of the upper lip; even a change in the size and expression of the eye was visible. During the examination he had many paroxysms of pain. The inferior left wisdom-tooth had been extracted. The teeth in upper jaw excepting the first molar had a normal appearance. The wisdom-tooth was elongated from lack of occlusion, and the gum around the same was slightly inflamed. Percussion of the teeth produced normal notes save in the first molar, in which the discord was very faintly heard, there was no soreness of tooth, but a change in the expression of the eye led to the belief of pulp-stones occupying it. There was also faint discoloration. The mesial buccal root was slightly denuded of gum tissue, due to extraction of the bicuspid and the injury to the gum. The cementum of the denuded root was not sensitive to any of the usual tests made, and I decided to open through the side of this root with a small drill to ascertain its vitality. The canal was entered with no visible signs of a pulp. No odor present to indicate that it was dead. I passed a flexible bristle to the apex of the root without resistance. A drop of blood was drawn from beyond the apex. A large opening was then drilled through the masticating surface of the tooth, and the pulp chamber was fully exposed and found to contain three large pulp-stones. One covered the canal of the palatal root, and upon its removal the entire pulp of that root came away attached and completely ossified except a sixty-fourth of an inch at the apex. Its removal was followed by a gush of blood.

The cure was like magic. The patient's general expression changed instantly, as if he had been freed from captivity, and he exclaimed: "Why, what have you done? The pain has gone; I can turn my head quickly without causing pain." Believing this statement to be true, and to immediately make further test, I said, "Perhaps it is only mental relief," upon which he remarked, "Mental or not, there certainly is a change, and I am free from pain"; and this condition has proved to be lasting, as well as true. All three canals were opened to the apex, filled with wax, and left for the dentist to finish. The patient reported having had the first night of uninterrupted sleep in over a year, with no pain. He also had been able to read without vertigo, and he very much enjoyed the ability to move his head quickly without anticipation of suffering. Not finding indications of pulp-stone in the wisdom-tooth, and it being no practical value to the patient, because of the loss of the antagonizing tooth, I extracted it with the view of examining the pulp, and thus prove tests of diagnosing pulp-

stones, and was gratified on opening the tooth to find a normal pulp. This is contrary to theory by surgeons who claim that pulp-stones only appear in teeth that have lost their antagonist. Thorough cleansing, sterilizing, and filling of the canals of the bicuspid in the right side followed. Examination of the antrum did not reveal a purulent condition, only a chronic inflammation. The discharge of pus was from the necrosis of the palatal plate. The operation consisted of burring away the sequestrum, abscess sac, and granulating tissue, curetting and removing same, and douching both the alveolar cavity and antrum with peroxide and bichloride solutions, and repeating the bichloride twice daily for forty-eight hours. Ten days later the report from the patient was very favorable, no inconvenience whatever having been experienced. This is one of many cases with such satisfactory results.

Another typical case bearing on the subject in hand is reported to me by my friend, Dr. Ives.

A lad, twelve years of age, was brought to him November, 1894, for dental operation. Examination of the mouth showed an overcrowded arch, resulting in irregularity of the teeth, which were very poorly calcified, and contained many sensitive cavities. In the inferior first molars were extensive amalgam fillings and several disintegrating spots. The pulps of the superior first molars were dead, and in reply to an inquiry as to why the lad wore glasses, his mother said, "By order of his physician, under whose care he has been for a long while for treatment of 'St. Vitus' dance of the eyes.'" The boy's eyes, lids and brows were rapidly and constantly twitching, to the great discomfort of himself and those about him, and he was nervous and irritable. Dr. Ives's experience enabled him to quickly see the relation between the boy's trouble and the condition of his teeth, and he directed that he be taken to Dr. Hasbrouck for the extraction of the four sixth-year molars, with the assurance that the extraction would cure his "St. Vitus' dance." This was done, and at the expiration of ten days the boy returned, without glasses, and all signs of irregular movements about the eyes had disappeared. The boy was then taken to the physician, a well known oculist of good repute, with a statement of what had been done, but he repudiated the idea that the change was owing to the extraction of the teeth. "It was impossible," he said, and claimed that the cure was entirely due to his own treatment.

These cases point to the idea previously expressed of the lack of appreciation among members of the medical profession generally, of the important *role* which the condition of the mouth and teeth, more especially the latter, plays in disease. They can be duplicated by the dozen, but hundreds, alas, of the sufferers from the protean effects of unsuspected dental disease never find relief

because of the ignorance of their physicians. There are many cases, again, when the dentist discovers the cause of the trouble with the patient's general health, but he is overruled by the physician, whose authority and knowledge are supposed by the patient to be supreme.

Few, perhaps, have better opportunities than I to see the evils which flow from the physician's ignorance upon the subject of the teeth. The physician, in formulating his theories for the explanation of obscure troubles, entirely ignores this factor. He has never been taught to appreciate the teeth as a possible element in any disorder, except toothache, or perhaps a neuralgia of the face. The medical schools are no aid to him, the text-books give no inkling of the truth. The teeth are the province of the dentist, and the dentist is too often looked upon with contempt by his medical confrere as being a one-sided, semi-educated man, when really this very one-sidedness has made him a master in oral and facial diseases. Upon these points the dentist does not vainly theorize. He gets results, and these results are his recommendations to the medical profession.

It seems to me that in this day of enlightenment upon the teeth among dentists, it is almost criminal in the medical institutions of learning to send their graduates out with less than half the knowledge which should be given them. If this be so with regard to the colleges, what shall we say of the man, who practising the most beneficent profession in the world, fails to acquaint himself with a subject so important to the sound pursuit of medicine? Is he not lacking in his duty to himself and to his patients? With so important a factor, in many cases entirely omitted, can he do more than vainly experiment upon his patients, blindly groping for what he has not eyes to see?

I have no objection to experiments with patients, with a view to further enlightenment, provided it is done honestly and with all the possible known elements estimated at their true value. But when experiment is necessary because the physician or surgeon lacks common practical knowledge which he can easily avail himself of, I cannot uphold it. Such a course must necessarily be merely mercenary. A theory formed by such a man must be wrong, his practice cannot help being mischievous, his results, so far as good is concerned, will be nil. He is simply a "guesser," and while he is guessing his patient's life may be slipping away.

It behooves us, then, to endeavor by every manly means to free ourselves from every envioning circumstance which tends to cramp our efforts to relieve human suffering. What we are after are results, not theory. As we can learn industry from the little busy bee or patience and perseverance from the spider, so we may even learn from the dentists the relations of the condition of the teeth

to apparently unrelated lesions. Certainly we should neglect no source of information which would strengthen or enlarge our means of fighting disease. So, and so only, shall we be able to confer upon our patients the highest benefits within the limits of our profession.

New York ; 30 West Fifty-ninth Street.

Translations.

FROM FRENCH WRITERS.

By J. H. BOURDON, L.D.S., D.D.S., Montreal, Que.

At the meeting of the Odontological Society of Great Britain, Mons. P. Hv. Poinot sent a communication referring to investigations he had made in the electric annealing of gold. Mons. Poinot presented to the Congress of Bordeaux last year an essay on the molecular modifications that occur in the constitution of metals in general by electric currents of sufficient intensity ; and in the paper to which we allude, he discusses the point of gold as a filling. He makes use of a 110-volts apparatus, with an intensity from 80 to 100 amperes. Such currents will volatilize gold foils, for the amperage must be in direct ratio to the section of the metal amenable to electric treatment. He does not exceed, in consequence, two and a half amperes ; uses No. 3 foils, supplied him by S. S. White Company. Every sheet is cut in two parts, and rolled into a rope, or folded into tape ; then each piece is cut into two equal parts, and each extremity of every string so formed is placed on two flat posts (*bornes électriques*), one fixed, the other being movable, in order to apply to the variable length of the strip. Through this gold passes an electric current, giving progressively from 0 to 2.5 amperes—the operation lasts half a minute. The gold is then cut into pieces required. It can be used at once, or kept for use ; must be kept very clean and very close, and passed lightly above an alcohol flame before using. It keeps the whole softness and malleability of soft gold ; every morsel is spread out with facility, without any tendency to shrink. It is pliant under pressure ; does not curl ; does not harden at its surface, as cohesive gold commonly does, but possesses to a superlative degree the cohesive properties. It realizes fully the ideal sought for in vain until now—the easy adaptation of soft gold united to the resistance of cohesive gold.

Abstracts.

Edited by G. S. MARTIN, D.D.S., L.D.S., Toronto Junction.

BICARBONATE of soda will arrest the toothache from a live pulp.
—*Dental Review*.

I AM fully convinced that the average dentist does not use temporary fillings nearly as often as he should—that far too many cavities are opened up, prepared and filled at once.—*Dr. Garrett Newkirk, in Dental Review*.

A COUNTER IRRITANT.—Wet a square of paper fibre with vinegar, cover it with red pepper, not too copiously, and apply to the gum. A small piece of rubber dam may be placed between the cheek and the paper to protect.—*Dr. Harlan*.

SILICO-FLUORIDE OF MERCURY.—This salt has been recommended as being twice as energetic as corrosive sublimate as an antiseptic. It is far less poisonous than the latter salt, hence it deserves notice. It is used in aqueous solutions, 1 to 1,000.—*Pharmaceutical Era*.

A PRACTICAL HINT.—An easy and rational method of securing good joints in gum sectional work, is to provide yourself with a sheet of white rubber, from which cut a piece for each joint about half-inch by three-quarters; lay it so as to thoroughly cover the space. Pack your dark rubber so that it cannot become displaced and a clean and perfect joint is the result.

TOOTHACHE DROPS.—Equal parts of carbolic acid crystallized, camphor, chloral hydrate, menthol and glycerine. Pulverize separately the camphor and chloral, mix, and when liquefied add menthol, previously triturated; and lastly, the carbolic acid and glycerine liquefied together by heat. In packing the tooth cavity with this, none of the fluid should be allowed to ooze over the gums.—*Western Druggist*.

I KNOW there are many who favor immediate root-filling, but in my estimation, the parts surrounding these affected teeth should be placed in a healthy condition, to produce healthy action, and that requires thorough treatment. When one studies closely the pathology of devitalized teeth, particularly of troubles arising from putrescent pulps, he cannot fail to discover that the whole tooth and adjacent parts are poisoned by the effete matter passing off from the dead pulp.—*Dr. J. H. Woolley, Chicago, in Dental Review*.

COCAINE solution decomposes in forty-eight hours. You need to prepare it fresh when you use it. If it is more than forty-eight hours old it will not give good results.—*Dr. Meeker, in International Dental.*

ALL broaches before using should be made thoroughly aseptic, and they should never be passed from one root to another without using the same precaution to free them from septic matter.—*Dr. J. H. Woolley in Dental Review.*

THE dentist who constructs artificial teeth has in his keeping the making or marring of the whole human face. If he is not an anatomist, and if at the same time he has not artistic ideas, and if he does not, as carefully as the sculptor, study the face which he is endeavoring to idealize, he is unworthy a place among artistic dentists.—*Dr. W. C. Barrett in Cosmos.*

BROKEN INSTRUMENT REMOVED FROM ROOT CANAL. (By Dr. B. H. Catching, Atlanta, Ga.)—The head of a Gates-Glidden drill was broken off in the root canal of a superior lateral incisor, about half way up. To remove it the canal was much enlarged to the broken piece. A four-sided, sharp-pointed drill was made from the broken instrument. A small hole was drilled by the side of the obstruction. Into the hole a Donaldson canal cleaner, repeatedly dipped in 75 per cent. sulphuric acid, was worked back and forth, with lateral pressure, which removed tooth substance from around the broken piece. A forcible discharge of water from a hypodermic syringe into the canal brought the piece out.—*Dental Review.*

BLEACHING TEETH BY MEANS OF SODIUM PEROXIDE APPLIED CATAPHORICALLY.* (By Henry Barnes, M.D., Cleveland, O.)—The case presenting was a right superior central incisor badly discolored. The root canal had been filled about two-thirds of its length. The process of bleaching was carried on as follows: A quantity of sodium peroxide, in powdered form, was placed within the pulp cavity and the unfilled portion of the root-canal. The positive electrode was then applied and the contents of the cavity moistened with water. In this case the voltage was carried as high as eighty, indicated on the dial, and the current was continued for from ten to fifteen minutes altogether. The cavity was next filled with a 10 per cent. solution of hydrochloric acid, to neutralize the sodium peroxide, then rinsed with bicarbonate of soda solution to neutralize the acid. The cavity was then lined with paraffined white wax, and filled with cement. The result was very satisfactory.—*The Ohio Dental Journal.*

* Clinic given at the Ohio State Dental Society, Columbus, December, 1896.

AMMONOL.—Dr. Watkins, at the First District Dental Society, State of New York, reported in December *Cosmos*, described ammonol, one of the coal tar products, as the most satisfactory preparation he had used for pericementitis. In cases where a tooth has been filled for some time and becomes sore and elongated, ammonol given in 5 to 15 or 20 gr. doses will entirely remove soreness in a short time.

CATAPHORESIS.—In a short time the most of us will be using cataphoresis to obtund sensitive dentine. Making a fresh solution each operation certainly has a great deal to do with its ultimate success. In a case where the dentine is unusually sensitive, it is possible that a certain amount of the pain might be avoided by heating the cotton with the solution before placing it in the cavity.—*Dr. H. D. Boyes, in Pacific Stomatological Gazette.*

MANY of our best dentists of to-day, and those who are continually experimenting, have but little to say, some because of inability to express themselves satisfactorily. Many a man has excellent ideas who is unable to put them in writing or present them to a society. Some prefer to keep them to themselves that they may have a slight advantage over their neighboring dentist. Such a man is untrue to his profession, untrue to his people, and belittles himself in the sight of God. It is every professional man's duty to do what he can to advance his chosen profession, and thus benefit the community at large.—*Dr. C. J. Soule, Rockford, Ill., in Dental Review.*

I HAVE no sympathy for the young man who says he cannot contribute a short paper, or talk to his local society meeting, because he has nothing of real interest to say. If we only opened our mouths when we had something of great value to put forth, what a very quiet world this would be—even during a presidential campaign. As a bit of mental discipline it would be an excellent idea for the young dentists to form a habit of writing up (in their moments of enforced leisure) any cases of interest that may occur in their practice, not simply with the chastened hieroglyphics of the case book, but with an eye towards a slight literary style and finish and scientific edge strength; not necessarily for publication either, but as an evidence of good faith and interest in their profession, outside the bread-and-butter aspect.—*Charles McManus, D.D.S., in International Dental Journal.*

THAT OLD CREASOTE ODOR.—Several times lately we have removed cotton dressings from cavities in teeth and pulp chambers more or less saturated with creasote, in most cases covered with more cotton soaked in sandarac varnish. On what basis a root or

cavity dressing should be covered with such a mass of micro-organism pesthouses we are not able to determine. Creasote, to begin with, is not a disinfectant, being simply an oleaginous antiseptic. It is not a destroyer of bacteria in the sense that a dentist should use it. It is not a deodorant or chemical disinfectant. It simply masks the smell of mephitic gases. It is very useful as a preserver of telegraph poles and fence posts. It is sparingly soluble in water, and is not an anæsthetic. It will arrest pus formation alone ; when iodine is dissolved in it, it is the iodine that does the work. As for a sandarac dressing, the alcohol in which the gum is dissolved is not a germicide, nor is the gum. Why use it? The more or less porous meshes of the cotton after the separation of the gum by evaporation of the alcohol, is a fruitful source of infection. Users of such dressing, as a rule, are not careful in applying them. They seldom or never use the rubber dam in making such dressings to roots, and never adjust it when removing them. Contaminated saliva entering an aseptic root is just as bad for it as the food debris, etc., was in the beginning. If you must use creasote, use it on shingles or for preserving wood in some form, but never in the mouth.—*Editorial, the Dental Review.*

DENTALPHOBIA.—Writing under this heading, Dr. W. H. Robinson, Alameda, Cal., in the December *Stomatological Gazette*, discusses that kind of pain experienced by some of our patients which arises entirely from dread of the dental chair. In these cases the patient has such a horror of dental operations that to touch a tooth with an instrument causes him to jump and declare he has been hurt dreadfully. The mind apparently does not distinguish between the sensations of touch and feeling, and the only anæsthetic available is to relieve the mind of the fear and dread that induces this condition, by making it capable of distinguishing between these sensations. Cure the pain dread that fear induces, and the actual pain the dentist causes will be but little trouble to the patient. As fully one-half the suffering in the dental chair is caused, not from dental instruments, nor from lesions made by them, it will be seen how worthless are all obtundents except as their application suggests and induces mental conditions that overcome this dread. Be candid with your patients ; do all you can by gentleness and sympathy to gain their confidence and relieve their dentalphobia. Use all rational drug obtundents, and when these fail join in the patients' whims, put their language in the superlative, intensify it to the highest degree ; tell them it hurts awfully, fearfully, worse than having their picture taken. To your surprise you will find this better than that old chestnut, "It won't hurt."

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

TUBERCULOSIS OF THE ALVEOLAR PROCESS. Carl Zandy (*Arch. f. klin. Chir.*, LII., No. 1, p. 178).—While this is considered to be a rare condition the author was able to collect thirty-seven cases from the literature of the last twenty-five years. He also gives the history of a patient observed at the clinic of Bonn. The teeth are of the greatest importance in the etiology of this condition. Carious teeth are the seat of entrance for tubercle bacilli. Wounds of the alveolar process, especially those caused by extraction, are of grave importance. Whether the bacilli come from a phthisical lung or from the outer world, they need no better soil for development than the alveolar cavity left after extraction. There is no seat of predilection in this disease, and any part of the alveolar process may be affected. As a rule, other parts of the buccal mucosa are involved at the same time. It is very likely that the pulmonary lesion which is found at the autopsy is secondary to the alveolar disease. Syphilis is no bar to a tubercular involvement of the alveolar process. The disease seems to develop between the ages of fifteen and fifty. Males are more frequently affected than females. Usually the gum will swell and become loose, soft and bleed very rapidly. This will soon be followed by ulceration, with pale, sluggish granulations. Following this the teeth will get loose and fall out and the bone may become necrotic. Pain is not very marked, but salivation is very profuse and the mouth has a very foul odor. A differential diagnosis is to be made from syphilis and carcinoma. The diagnosis will be facilitated by the presence of tuberculosis of the larynx or lungs. The best therapeutic measure is through curetting and removal of all suspicious tissues. This can be followed by applications of equal parts of lactic acid and distilled water to all recurring foci.—*Amer. Med. Surg. Bull.*, August 15th, 1896.

MOLDING OF THE SUPERIOR MAXILLA IN ADENOID VEGETATIONS.—According to *Rev. Hebdom. de Laryng., d'Ortol., et de Rhin.*, Korner, in 1891, drew attention to the particular change of form which takes place in the upper jaw, at two different periods. When adenoids obstruct the nares during the first dentition, elevation of the palatine vault is produced, along with a sudden retardation of development in the whole upper jaw; the transverse diameter is shortened, and the longitudinal lengthened. After the second dentition, the following changes are added to the above: The bony palate becomes still more elevated; the alveolar borders approximate still closer, and the maxilla seems to be compressed

laterally, producing an angle at the median line; the two middle incisors turn their lingual surfaces toward each other, and a transverse section of the maxilla assumes an oval form. In nasal obstructions, of other origin, the secondary changes of the maxilla are not like these—the angle of the median line and the V-position of the middle incisors being exclusively found with adenoid vegetations. These changes are denied to rickets, because those due to rickets are found in parts of the body in full development. This occurs in the cranium in the first years of life, whereas the molding of the superior maxilla from adenoids occurs most often after the second dentition. Besides, rachitic anomalies occur only on the *lower* jaw, while nasal obstruction changes due to adenoids are limited to the *upper*. Finally, Rosenberg, in 1895, pointed out the frequent absence or decadence of the *lateral* incisors in these cases. Reyntjes has seen a case of elevated palate without adenoids. Bloch found elevated palate related to modification of the lateral cavities; but, along with Sikkell, maintains that the median line angularity presents only with adenoids.—*Surgical Department, Amer. Med.-Surg. Bull., March 10th, 1897.*

ZONA FOLLOWING EXTRACTION OF TEETH.—The patient, aged twenty-five to thirty, consulted me on July 30th, 1896, for an eruption on her body and right arm. She gave the following history: On July 20th six teeth were extracted under gas, namely, the four lower incisors, the right lower canine and a left molar. On July 26th she felt uncomfortable about the right side of the back, the inner side of the right arm, the right axilla, and the right mamma. This was succeeded by tingling pain, which every day increased in severity, and was accompanied by occasional shooting under the right arm. *The Eruption.*—Zoster, with the following distribution. In front: Two clusters of vesicles just above the right mamma; one of these in the nipple line, the other between that line and the axilla. Behind: Three clusters near the middle line and two near the axilla. Right axilla: A number of vesicles; in some of the groups coalescence had occurred; several of the vesicles were rather larger than usual. Inner side of right arm: a few groups of vesicles. When seen again on August 3rd there were fresh clusters of vesicles lower down on the inner and upper flexor surface of the arm. Fresh groups had also appeared on the back; the vesicles of the older ones had coalesced. The patient complained that the pain had been very severe, and this was borne out by her appearance. From this date recovery was rapid. An interesting feature of the case was the fact that about a year before, twelve teeth were removed under ether, when the patient suffered very much from shock, loss of blood, and, in her opinion, the effects of the anæsthetic. Comparing my rough sketches of the distribution

with Dr. H. Head's diagrams in the last edition of "Quain's Anatomy," Vol. III., part ii., p. 346, etc., I find that the eruption approximately corresponded in front to D_4 ; behind to D_3 , D_4 , and D_5 ; and on the arm to D_3 .—*George Pernet, L.R.C.P.Lond., M.R.C.S.Eng., in British Medical Journal, January 30th, 1897.*

Selections.

THE CARE OF THE TEETH.

By F. H. FUNSTON, M.D.

No meal should ever be partaken of without immediately thereafter rinsing and washing the mouth with clean, clear water, if nothing else, and obviously the addition of some pleasant antiseptic, like euthymol, is preferable. So, too, this act should be succeeded by a thorough scrubbing of the teeth with a moderately stiff brush, passed both laterally and perpendicularly over front and back surfaces alike; not even the most microscopic quantity of food should be allowed to remain in the interstices of the teeth or about the gums. Such a measure, if carefully carried out with the aid of a strictly antiseptic dentifrice, will prove not only a means of warding off offensive breath and the many maladies common to the gums and teeth, but will speedily eradicate tartar and retracted gums.

During the last half-century dentifrices have multiplied by thousands, each presenting its own peculiar claim. Some are really valuable; others are harmless; not a few are dangerous. In the latter connection, too great stress cannot be laid upon the fact that any article intended to be utilized for the toilet of the teeth, and which presents an acid or markedly alkaline reaction, is to be regarded with suspicion; it may be added that a number in the market are neither more or less than dilute solutions of spirit of salt (muriatic acid), which is almost rapid in its action upon enamel, and moreover promotes decay and tends to produce offensive exhalations. Others are little more than pleasantly flavored soap; but if the latter ingredient is good and pure it cannot be considered objectionable. Tooth powders, too, which sometimes accompany fluid dentifrices, must also be looked upon with suspicion, as they not infrequently contain ingredients that may prove detrimental. And it may here be remarked that those applications for the teeth which are warranted to immediately whiten are always dangerous, inasmuch as they rely upon strong chemicals for their action.

A recent improvement in this line is euthymol tooth paste, which,

as its name indicates, depends in large measure for its value upon euthymol, a preparation that has long been employed by surgeons wherever perfect antisepsis was desired, and has moreover deservedly gained universal popularity because of its freedom from danger except to germ life.

To the mind of the writer this preparation warrants specific mention inasmuch as it offers the ideal of a dentifrice in that it is at the same time a powerful antiseptic, reasonably detergent, modest in price, pleasant in odor, and exceptionally grateful to mouth and gums, while last, but not least, its use affords a positive protection against foul breath and other conditions peculiar to the mouth that lead to retraction and softening of the gums, staining of enamel, formation of tartar, and decay ; it is likewise a reasonably certain guarantee against a number of diseases which gain entrance to the human organism through germs in the mouth and digestive organs.—*Popular Science News*.

THE TRADE IN CRUDE RUBBER.

This remarkable substance is obtained from the milky juice of certain trees and different varieties of climbers. South America is the principal source of supply—Brazil, of the many states producing it, leading in quantity and quality, and having in its great forests sufficient to meet twice the wants of the world. The best is Para (fine, medium and *sernamby*), from the great basin of the Amazon, where more than eighty thousand *seringueiros* (gatherers) are engaged in the dry season in collecting gum. White Para, "virgin sheets," a new variety in three grades, comes from Matto Grosso. Since its importance first began to be felt, this gum has exerted an increasing influence upon the spread of civilization, especially along the Amazon and Orinoco and their tributaries and the great streams which pour out from the interior of the Dark Continent. Para, formerly an insignificant village, has grown to be a city of a hundred thousand inhabitants, with modern features, and Manaus, up the river, is fast following it. India rubber is the mainstay of the northern Brazilian states, Bolivia and Eastern Peru. Brazil has a great advantage in its immense waterway ; ocean-going steamers run twelve hundred miles up the Amazon, whereas every African river except the Congo has a bar at its mouth and cataracts not far distant from the coast line. It is, besides ivory, about the only commodity produced in the interior of a tropical country that will bear the expense of transportation, often on the heads of natives along tangled man-paths, to the seaboard. So in many places it has been the basis of first commerce.—From "*India Rubber and Gutta-percha*," by Clarke Dooley, in *Appleton's Popular Science Monthly* for March.

A FERTILE CAUSE OF DEFECTIVE TEETH.

By DR. WILLIAM H. RICHARDS,
President of the Southern Dental Association, Knoxville, Tenn.

Dentists and physicians, in my judgment, do not recommend or prescribe as often as they should the use of suitable preparations for the care of children's teeth. If a proper and agreeable preparation be kept constantly in the nursery the little people would soon take a pleasure in its use, merely for its pleasant after-effects. Thus, through the apparent *play* with the detergent, they are paving the way to sound teeth and healthy gums, besides keeping the secretions of the oral cavity free from unhealthy contamination before entering the body.

I have been trying for a long time various preparations of the kind, with a view to settling upon something which I could recommend to my patients without inviting reflections upon my judgment. With this end in view I critically examined the Euthymol tooth paste manufactured by Parke, Davis & Co., and I feel safe in saying that I can direct the use of this preparation without expecting anything but good results.

Proceedings of Dental Societies.

ONTARIO DENTAL SOCIETY.

The Ontario Dental Society will meet in Toronto, in the beginning of July. A good programme is being prepared, and one of the best meetings ever held by the Society is expected. Lay your plans so that a trip to Toronto will be possible in July. You will be reminded of this again.

G. S. MARTIN, *Sec'y.*

Toronto Junction.

MANITOBA DENTAL ASSOCIATION.

The general meeting of the Manitoba Dental Association, which is held every three years, took place in Winnipeg on Tuesday, January 12th.

The meeting was very largely attended, and a lively interest was taken throughout by all those in attendance.

The retiring Secretary, Dr. S. W. McInnis, read a long and carefully prepared report stating that on account of delayed trains he

had been unable to give his report at the last general meeting, so that he now gave an account of six years' term of office.

During the past six years nine names have been added to the list of registered licentiates in the Province, and sixteen to the list of registered students.

The standard of matriculation has been raised until it is now the same as that in medicine or law, and the term of indentureship has been extended to four years.

The Treasurer and Registrar also gave satisfactory reports.

The next business, that of electing officers for the ensuing term, resulted as follows: President, S. W. McInnis, L.D.S., D.D.S., Brandon; Secretary, G. F. Bush, L.D.S., Winnipeg; Treasurer, G. J. Clint, L.D.S., Winnipeg; Registrar, R. H. Robertson, L.D.S., D.D.S., Portage la Prairie; J. L. Benson, L.D.S., D.D.S., Winnipeg.

The first step towards the formation of a dental society was taken by Drs. McInnis and Bush, the former demonstrating the use of cataphoresis, and Dr. Bush giving an article on bridge work.

J. P. Raleigh, who applied for application as under Section 13 of the Manitoba Dental Act, was admitted, and of the students who came up for final examination, one only, viz., C. A. Powers, of Brandon, reached the required standard.

VERMONT STATE DENTAL SOCIETY.

The twenty-first annual meeting of the Vermont State Dental Society attracted fully one hundred dentists, many of them from without the State. Rev. J. Edward Wright offered prayer at the opening meeting Wednesday evening, and the address of welcome was delivered by Dr. C. W. Steele, of Barre. Dr. F. P. Mather, of Chester, the President, then read his annual address, which was followed by a discussion of some of the points regarding the best method of increasing the effectiveness of the Society. Papers were also read Wednesday evening by Dr. George F. Cheney, of St. Johnsbury; Dr. N. W. Gilbert, of Northfield, and Dr. W. R. Marsh, of Brandon. Prof. J. Foster Flagg, of Philadelphia, delivered the address Thursday morning, and in the afternoon several experiments were given illustrating the latest discoveries in painless dentistry. The annual banquet was held at the Pavilion Thursday evening. Dr. K. L. Cleaves acted as toast-master, and music was furnished by the Montpelier orchestra. At a business meet held Friday morning the following officers were elected for the year ensuing: President, C. S. Campbell, of St. Albans; First

Vice-President, J. A. Robinson, of Morrisville; Second Vice-President, K. L. Cleaves, of Montpelier; Recording-Secretary, Thomas Mound, of Rutland; Corresponding-Secretary, Grace L. Bosworth, of Rutland; Treasurer, W. H. Munsell, of Wells River; Executive Committee, H. Terrell, of Rutland; J. E. Taggart, of Burlington; C. W. Steele, of Barre; State Prosecutor, G. W. Hoffman, of White River Junction.

Reviews.

A Practical Treatise on Artificial Crown and Bridge Work.—By GEORGE EVANS, Lecturer on Crown and Bridge Work in the Baltimore College of Dental Surgery. Fifth edition. Revised. 625 illustrations. Pp. 336. Philadelphia: The S. S. White Dental Manufacturing Co. 1896. Price \$3.00 net.

Nothing has been a greater drawback to the correct practice of crown and bridge work, than the temerity of impostors on the one hand, and the distrust of ethical men on the other. The former pretended to achieve results of a permanent character, which time proved to be failures, and which exposed their ignorance of the first principles of diagnosis, as well as their disregard of moral law. The latter hesitated to follow any lead of the advertising fraternity, and instinctively suspected the value of anything which that fraternity so loudly extolled. The truth lay midway. The quacks quacked, and their imitators cooed. The journals discussed the questions *pro* and *con*, and the decision must be declared, that the very first requirement for the correct practice of crown and bridge work, is personal honesty and common sense. Indeed it is the very first requirement for dental practice. The author of the above work is an expert of the first water, and one who does not find it necessary to use or hire out his name, to trumpet a reputation. As a master of the art, his opinions are reliable. The preparatory treatment of teeth and roots for crown work is fully discussed. We cordially commend these five chapters to our purely "practical" men. There is up to date, nothing known worth knowing in relation to artificial crown work which the author has not touched upon, and while he succeeds in defending the hygienic objections to collar crowns theoretically, we believe that practically these objections are too often unanswerable. Predisposing, structural, local and constitutional objections are numerous. The collar or ferruled crown is a physiological intrusion. The chapters on bridge work are very thorough. Whatever may be said in defence of some of the suggestions offered by various writers, they are

utterly indefensible on conservative and even hygienic principles, especially with the knowledge we possess to-day of the bacteriology of the mouth. Dr. Evans frankly admits this and offers the very best advice an honest writer can give. The common practice of sacrificing sound cuspid crowns to obtain foundations for posts, ought to be condemned as malpractice. It is a professional felony. There is no other work in existence which is more useful to the practitioner who practises crown and bridge work. While not in any way depreciating the merits of the work, we deplore the barbarous taste, or rather want of the theory and philosophy of taste, which prevails so widely in our profession on this continent, and which is doing so much to disfigure the human mouth. If the height of art is to conceal art, we cannot but be ashamed of the libels on the science of æsthetics, which so many of our dentists are making in their practice. This does not in any way detract from the value of the standard work by Dr. Evans. He has eliminated obsolete methods, has reduced unimportant ideas to briefer terms in the description, and has incorporated not only many new methods and suggestions, but he has given very plain and critical advice, by which faddists could profit, and the best of practitioners instructed.

California State Dental Association. Twenty-sixth annual session, Santa Cruz, 1896.

Professionally, these proceedings are full of interest. Politically, the golden color of its cover seems to hoop it up for the golden standard, which, we are glad to say, has buried its silver rival—we hope, forever.

Appleton's Popular Science Monthly.—Continuing his series on the Racial Geography of Europe in *Appleton's Popular Science Monthly* for March, Prof. William Z. Ripley discusses "The Shape of the Head as a Racial Trait," showing with the aid of maps how the "long-headed" and "short-headed" peoples are distributed.

Transactions of the American Dental Association.—Twenty-sixth annual session, August 4th, 1896, Saratoga Springs. Publication Committee, Drs. George H. Cushing, E. T. Darby, A. W. Harlan. Philadelphia: S. S. White Co. An exceptionally interesting volume.

Transactions of the American Dental Society of Europe.—Nineteenth annual meeting, Geneva, Switzerland, August, 1894. Dental Digest Co., Chicago.

Dominion Dental Journal

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All Communications relating to the Business Department of the Journal must be addressed to DOMINION DENTAL JOURNAL, Room 97, Confederation Life Building, Toronto, Canada.

VOL. IX.

APRIL, 1897.

NO. 4.

TRUCE WITH TREASON ?

The fastidiousness of a few of our friends is, to say the least, amazing. We expect the hate of the quacks, and the hostility of those who adopt quack methods, but to be at variance with those who are neither, is "the unkindest cut of all." If we took the friendly advice of some of the latter, we should fraternize with the tramps of the profession, we should keep open house for them, welcome them to our meetings, treat their mischief making with meek forbearance, approach their efforts to drag dentistry through the mud of their own mean instincts, with the gentleness of a sucking dove. We should give Judas the kiss of peace and be obsequious to Cain. Perhaps, too, we should favor them for professorships in our colleges, and seats on our Boards, and beg them to do us the honor of giving us a code of ethics of their own conception. This sort of squeamish policy may suit the fancy of the pusillanimous and the indifferent, but it will not inspire either respect or courage in the face of organized mischief. When men carry their malice into the Legislature and undo much of the good that has been won by the persistent work of thirty years ; when the departmental stores are willing to encourage unprofessional connections ; when the law-breakers aspire to become our law-makers, and the

camp of advertising cheap quacks, such as disgrace us in the Toronto and Montreal papers, revel in their shame, fastidiousness expects us to apologize for our existence and hoist a flag of truce. Not if we know it!

We shall continue to do all in our power to put quacks and those who imitate their methods in their proper place, as the tramps and *canaille* of the profession, whether they are professionally qualified or not. To-day, in Canada, we have an overwhelming majority of respectable and publicly respected dentists. We are recognized as a profession in every Province, having an equal rank with medicine and law. That was won by the sacrifice and earnestness of respectable men. Are we to lose it because of the low instincts of the small band of the disreputable? Are we to let the uprooting of the work of thirty years go on, and if we fight at all, are we to fight with the scabbard instead of the sword? The pigeon-hearted people ought to go to bed and hide their heads under their pillows. If they are afraid of wounding the tender susceptibilities of the cheap-jacks who are busy kicking them, they should retire into a monastery, and pray for the millennium. At least they should wear sackcloth and ashes and reverently beg the quack advertisers of Toronto and Montreal to share with them a modicum of their humbug and hypocrisy. Conciliation with quackery is akin to truce with treason.

EDITORIAL NOTES.

SOME of our friends think that our method of dealing with quacks and quack imitators is too pugnacious. On the other hand, we think that their opinion, as well as whatever "method" they have, if they have any, is too pacific. Men who deliberately malign their better-educated and more skilful confreres, and who make lying to their patients an art; who even glory in the shame of seeing their names in printed falsehoods, are entitled to all the contempt they deserve. In the history of the profession it is well, too, that the stain they have brought upon it should be duly credited where it belongs. Do not imagine you hurt their "sensibilities" by treating them as professional tramps and outlaws. They glory in their disgrace.

Do the young men who forget or ignore their duty as ethical practitioners ever stop to think that the stain they attach to their professional character, will stick as well to their personal and social reputation? To make a few dollars more is poor compensation for the loss of self-respect

SOMEONE aptly said, that men who are gentlemen do not need a code of ethics. It is quite true. It is also true that saints do not need the Ten Commandments ; the dead do not need air ; men who are well do not need the doctor. When we have in our profession no one who is not actuated by the conduct one gentleman shows to another, we shall not need a code of ethics. If our associations are to be kept free from the approach of the professional jockeys and sharpers, a code of ethics is the only safeguard.

THE sooner that the reputable members of the profession in the Provinces abandon the idea that when they are asked by the Boards to interest themselves in legislative protection, they are bestowing upon the officials a personal favor, the sooner we will succeed in preventing such amendments to the Acts of Incorporation as were passed at the last meeting of the Quebec Legislature. Every respectable dentist should do something to place the best interests of the profession before the representative of his district.

THE many friends of Dr. Ralyea, of Oswego, one of the fathers of the profession in Ontario, will learn with regret of the death last month of Mrs. Ralyea, within three years of their golden wedding.

A DENTIST who glories in his professional shame is morally insane.

Post=Card Dots.

Do you think there are openings for dentists in the gold-mining districts?

Certainly we do. There are lots of the population there cutting their wisdom teeth.

Do you think "exposure" and "ridicule" of quackery will stop quackery?

We would reply by asking questions. You have perhaps tried the plan of letting things drift. Has it stopped quackery? Or you may have moralized to the quacks. Did that stop them? Or you are so mad that you think you will imitate them. Will that stop them? Quacks do not need the respect or friendship of the dentists. They want the business of the public, and the less they have to do with the dentists the more they can humbug the public.

Personal.

"Is Dr. Relyea still living?" an old friend wrote us. "Living?" Well, rather, and as he writes, walks and works as actively as he did when he lived in Belleville twenty years ago, he is very alive, and as he wrote us, "It is better to be young at eighty than old at forty." There is a moral in that remark for young men in our ranks.

DR. S. J. ANDRES did good and faithful service for the Dental College of the Province of Quebec, but has been obliged to retire from the position of Honorary Superintendent. Dr. L. J. B. Lablanc replaces him. Dr. Andres was presented by the students with a handsome walking cane, and an address. He will always have the affection of the boys, and the warmest good wishes of his confreres.

COATING CASTS FOR VULCANITE WORK.—A plan has recently been suggested for this, but as it was invested with a certain amount of ambiguity, we have been at some trouble to find out what was meant, and how to make the preparation, for the benefit of our readers. Procure a quarter of an ounce of "collodion," add to this three-quarters of an ounce of sulphuric ether, so as to thin the collodion down, and pour into the bottle containing these a package of "silver gloss." Silver gloss is a preparation of tin and zinc, and may be obtained of all dealers in paints, oils, putty and other materials for house painting. Though called silver gloss, it contains no silver. It comes put up in papers of an ounce or more, in the form of an impalpable powder. It unites, to a certain extent, with the collodion, when shaken, and is applied to the face of the plaster cast, as well as to the reverse of the investment in a case flaked for vulcanite work, with a camel's hair pencil, leaving a very even and thin film over these which effectually prevents the adhesion of the vulcanite to the plaster, permitting the case to come from the flask clean. The silver gloss may be had at slight expense enough to last for a year or more with ordinary use. It should be kept in a well-corked bottle, and the pencil cleaned after use. Should particles of it adhere to the plate it can be entirely eaten off by immersion in a bath of nitric acid and water—one-quarter acid, three-quarters water; but this we have not found necessary, as it comes from the flask clean.—*Dent. Office and Lab.*

\$700.00 CASH

Will buy one of the best furnished dental offices in Winnipeg. This is a snap. Good reasons for selling. Business established 1881.

Apply,

ROOM 9, MCINTYRE BLOCK,
Winnipeg.

Dominion Dental Journal

VOL. IX.

TORONTO, MAY, 1897.

NO. 5.

Original Communications

ABOUT POPULAR EDUCATION AND THE REASONS FOR IT.*

By N. PEARSON, L.D.S., Toronto.

The paper read by Dr. Martin is an admirable one and timely. In Toronto and elsewhere, no doubt, the time has come to make a move in the direction indicated, and the Toronto men ought to be the pioneers. Here we suffer first and all the time. There is no manner of use in appealing to the ethical nature of men who advertise the superiority of their professional attainments and boast of secret methods only known to themselves in the most immodest and flagrant manner. These methods of flaunting hypocrisy and immorality are the life substance of their professional existence. They can't live without it. It is a necessity with them or they would not be doing it. If a man is a success, would he have any need of saying that he is the only living specimen of "a howling success" in any line, or that he possesses secrets not open to any other scientific experimenter, and expect a discerning public to believe such consummate trash in this age of advanced thought? Such men can't be successful for long. The better class of reasonable thinking people are not caught, but the ignorant are; and herein is the course of duty laid out for us.

Our duty is to organize and to teach this class of the community wherein their interest is at stake, and how to protect themselves from such immoral and fraudulent impostures. Take the unwary and ignorant public into our confidence, as it were, and teach them how to avoid the net placed before them and into which they are

* Read at meeting of Toronto Dental Society.

daily falling. Every respectable, reputable dentist is made aware of cases of discreditable, avaricious and dishonorable transactions, not to say anything of malpractice and permanent injury done in many instances, while dishonesty and misrepresentation are too common to be mentioned. We can't make use of these innumerable instances. We don't wish to. They are better left alone to work out their own ends. No good end can be obtained by abuse. No invective, no language, no pleading, no reasoning can touch natures of the sort who are not possessed with instinct enough to acknowledge a sense of obligation to any professional *core de honor*, therefore we are justified in proceeding to use any weapon of defence that is at once honorable and dignified, and I know of no better way than to use honest money and honorable methods of teaching the ignorant how to act and when and who they ought to employ as dentists.

There is no manner of doubt that the present evil is largely due to the disastrous effect of departmental stores having inaugurated in the minds of the people a mania for bargains and cheap counters until the dementia has so seized hold of them that it is applied to everything and everybody, and "something for nothing" may be the motto written on the popular brain, and the cry is adopted by the irresponsible and avaricious hog in dentistry and made use of to support a professionally immoral and tottering career a little longer and to indiscriminately slaughter the elements of legitimate trade and revenue for those deserving support.

I would advocate a thorough organization of the profession of Toronto, and a formation of a fund to be expended by a committee of the organization in printing and distributing literature, advertising liberally in the daily press, in an impersonal way, facts and reasons and information that would appeal to common sense and justice.

We are quite aware that we would have no reasonable hope of appealing to the daily press to suppress any advertisement, no matter how flagrant a breach of ethics it might be, or how fraudulent the tendency might be, or who would be deceived; that is no concern of the press, but by a judicious use of these same columns we might, in the name of a recognized, honorable society, place alongside of such, an advertisement, and by paying for it at the same rate, counteract or counter-irritate the effect and do some good. We might appoint a committee on advertising and carefully consider each article to be submitted and select points of merit and telling facts, original and selected. In reading over the various journals I have been struck very frequently, as, no doubt, every dentist has, with an article that ought to be read by every parent in the land, and, indeed, why should not every parent in the country be in possession of every good idea about the teeth

of themselves and their children, except the technical and practical. Indeed, it strikes me that we have been asleep too long and the time has come to wake up and be doing something, and be interested not only privately but publicly—large and good and sensible. Let us get hold of the public ear and not only open it and interest it and enlarge it with wholesome common sense, commendable facts that will create respect and admiration and confidence, but at the same time stuff it effectually (*per contra*) against the evil effects of designing imposture.

If the time is ripe and there is good to be done by putting the idea into execution, no desirable object is to be gained by pursuing details any farther in a paper, as a few willing workers will carry on the work very much better so vaguely outlined here. It has occurred to me, however, that every dentist in the city should be personally canvassed and have a chance to cordially identify himself with the move as quite a separate and distinct organization from any other, and be convinced that he is personally and largely financially interested in its success, and a tax of at least ten dollars is expected to stand opposite his name, to be returned to him ten-fold indirectly in the near future, for without money nothing can succeed, and he is a pusillanimous poltroon if he is going to be benefited to any extent at the expense of somebody else, and by the labor of love of willing hands.

POPULAR DENTAL EDUCATION.*

By G. S. MARTIN, L.D.S., Toronto Junction.

We have all, I have no doubt, had our day dreams in which we pictured a dental utopia—a condition of things under which an intelligent, non-irritating public formed our clientelle, where our work lay not in the line of difficult operations to repair the ravages of disease caused by neglect, but in the direction of rendering such operations unnecessary. In this utopia our patients came to us not when driven by pain to have teeth extracted or nerves destroyed, but came at regular stated times for examination. The children were placed in our charge at two or three years of age and brought to us regularly, so that no temporary teeth were allowed to ache; no operations, distressing alike to patient and operator, were required, and as a result relations of intimacy were established between the interested parties. Our patients were intelligent enough—(imagine it, if you can, ye careworn and weary practitioners!)—intelligent enough to leave the care of their teeth and mouths entirely in the dentists' hands; intelligent enough to

* Read at meeting of Toronto Dental Society.

understand that the temporary teeth are but twenty in number, and that the teeth coming after six years of age are of the permanent set; intelligent enough.—

But why continue the recitation of what we dreamed? We all know the dream and the rude awakening we have received, as some poor ten-year-old victim is dragged in by its benighted parent to have a first permanent molar extracted.

I have been led to select this subject because of a deep and growing conviction, that something ought to be done in the matter of educating the public at least in the direction of this ideal state dreamed of; in fact that something must be done before we have done our duty by the public. Our duty is not discharged, you will agree with me, when we have given so much work for so much legal tender. If we are to maintain our claim to rank as doctors of dental surgery, we must be in a wide sense not only operators but educators as well. The importance of the question I have raised will be more readily grasped if you consider that it involves problems that are recognized as of vital importance in our profession, such as "How shall we prevent the shyster from undermining our profession?" and "How prevent overcrowding of the profession?"

We find in dentistry conditions found in no other profession, due perhaps to the fact that it is the youngest of the professions. Tell a man that it takes several years' close study before one can legally practise dentistry and his answer is, "Does it take that long to learn to pull teeth?" When I left school-teaching one of my trustees said it was a pity a man of my intelligence should go pulling teeth. Unpalatable as the thought is to us, it remains a fact that to the great mass of people we are known as tooth-pullers and not as tooth-savers. The extreme public idea is well illustrated by the speech of Senator J. A. Stewart a month or two ago in the Georgia Legislature, when speaking of the proposal to make a more stringent dental law. "There is nothing," said he, "in going to school so long, anyhow. There are just two jaws and thirty-two teeth, and any schoolboy in the State can learn all about dentistry in two weeks. Any man with any common sense knows how to pull a tooth. The whole business ought to be repealed. It is foolishness to dignify dentistry with all this consideration. I can teach any young man who has sense enough to come in out of the rain all that it is necessary to know about dentistry in a fortnight."

Lest it be thought this is the opinion of an illiterate man—a "Georgia cracker"—you will be interested to learn that this Senator speaks in the double capacity of legislator and physician, and is thus twice armed.

As in medicine the itinerant medicine man, or the seventh

daughter of a seventh daughter, takes precedence in the eyes of the uneducated over the regular practitioner, so in dentistry the long-haired Indian medicine vendor from the wild and woolly west, who camps on the vacant lot and pulls teeth gratis with orchestral accompaniment, is always a better dentist than the man who pays rent.

A dentist may spend years in trying to build up a practice, and just as he is congratulating himself some miserable cur who has managed to procure a license, a hypodermic syringe, half a dozen forceps and a vulcanizer, opens "parlors" (these fellows always call their offices parlors), and our friend finds himself with ample leisure to figure out "Where am I at?" Not that I would not argue that good work and straight dealing will tell in the end, and does all through with an intelligent minority, but we all meet enough of this to dishearten the bravest of us. The trouble seems to be this: The only men who keep themselves in evidence before the public are the advertising men, and they, in proportion to the loudness of their advertisements, impress the public with their very commercial ideals. It is for us to decide whether there cannot be devised means of educating that shall counteract these "ads." we see displayed *ad nauseam* in our dailies. The public mind as at present constituted cannot discriminate between quackery and honesty, and cannot appreciate such a thing as professional ethics at all.

The other crying need of the public, and one fraught with much danger to health, is the total lack of any education among a large proportion of the people as to the functions, importance and necessity of care of the teeth. Perhaps not a week passes without evidence of this need being brought before the dentist, until he asks in despair, "Is there any other thing about which the people are so ignorant as the teeth?" It may be said we can educate at the chair as opportunity presents. So we can, and so we all do, but our regular patients are not the ones needing the education in the sense that thousands do who have no regular dentist, and who never take their children to one or go themselves unless driven by pain and the teeth past saving permanently. There must be devised some broader method of educating the people than yet proposed. We cannot blame the business man if he judges our profession by his own commercial standards. We must do missionary work first.

There is no use abusing the newspapers for printing for so much per inch the flaming "ads." of these knights of the forceps and the hypodermic, offering store teeth at \$3.00. The publisher cannot be expected to discriminate between the quack and the regular in any profession unless it be in favor of the man who takes six inches space instead of one. As well ask them to refuse the full

page "ads." of the departmental store without offering something in exchange.

There is very little use abusing the quack in the columns of the dental journals—these men don't read the journals. Writing about the quack in our journals for other dentists to read, may have a moral effect on those who read, particularly the young man entering practice, but the quack himself is not to be reached by these methods. If he reads, his thick skin will protect him; he is not sensitive; he is joined to his idols and will remain so until the public are so enlightened as to the importance of the teeth and the necessity of securing skilful treatment that he will find it does not pay to offend their eyes with lavish display of printer's ink.

What then must be the means of accomplishing this? First, I think some means should be devised of educating the medical profession. The influence of the physician in the family can scarcely be overestimated. If medical men were more thoroughly educated regarding the functions and importance of the teeth, they would insist on their patients paying regular visits to the dentist and keeping the grinders in shape, instead of, as many of them do now, condoning and abetting the destruction, not only by giving no intelligent, timely advice, but also by using the forceps in and out of season. There are many notable exceptions among the medical profession, but we fear by far the great majority are sadly, culpably ignorant of the simplest principles of dental conservation. I could give names and addresses here in Toronto, of children kept out of school over a year, while the physicians treated "running sores" so offensive that it was adjudged dangerous to the public health to have them attend school; yet these same offensive running sores were nothing but cases of alveolar abscess, and were cured by a dentist by the extraction of a diseased tooth. How to reach the medical profession is to my mind one of the hardest problems before us, but we cannot expect much from the public when their medical advisers even in fair Toronto are so ignorant. There should be instituted in connection with the final year in the medical schools a course of lectures on the importance of the teeth, and the possibilities of modern dentistry in their preservation. In country places the resident medical men have to do a great deal of dentistry, and they should be taught to do it intelligently.

Next I would say, educate the public school teachers, as it is through the medium of the schools we must hope to reach the children, and through the children we will reach the homes. The text-books on hygiene contain little or no information regarding the teeth, about as much as Senator Stewart, M.D., of Rockdale County, Georgia, gave to the Senate when he said: "Two jaws, and thirty-two teeth." Maybe he read up a school text-book before speaking.

Physiology and hygiene are usually taught orally only, the pupils not being supplied with text-books.

Some one has said that if man is to be taught anything he must be taught while young. The reason so many are neglectful of the most ordinary care of their teeth is because it has never been taught in youth, and thus has not become a habit. A child is taught to wash his face and hands, but is not taught to clean his teeth. Teachers send children with dirty hands out of the room, but allow those with teeth tenfold dirtier and more disgusting to remain. Is it any wonder that men and women allow their teeth to get filthier than they would tolerate in the case of their feet.

I lost my temper once with a man in my chair who boasted that he had never cleaned his teeth in his life. I had just extracted the first tooth he had lost. He said he believed if I cleaned them they would all decay; just as if I would take all the enamel off them in order to make future work. I said, "Do you wash your feet?" He became indignant, and asked me what I meant. "I don't know," I said, "but you applied the same principle to your feet as to your teeth—afraid to clean them lest they become sore." I then advised him not to attempt a trip to England, or he might be put in quarantine for "foot and mouth" disease.

I would suggest as the best method of spending the surplus that seems in danger of accumulating in our treasury, that the Toronto Dental Society offer prizes or take some such method of getting members to write essays on the teeth, the best of these to be printed and distributed, in the name of the Toronto Dental Society, among the teachers of the city, and as widely as we can spread them, among our patients. Coming officially from a society, the pamphlets would have an effect no amount of advertising pamphlets from private individuals could.

Our Public School teachers, let me say, are among the most intelligent patients we have, and numbers of them have spoken to me of the poor little ones crying at school with the toothache, and having to stay out for days with swollen faces. They will welcome any assistance we can give them in educating the children. I have no doubt the inspectors would sanction a properly worded pamphlet placed in our teachers' hands. Something in the pamphlet line should be prepared for free distribution in the homes of the city, if our surplus would allow. I think, however, that this is a matter which should occupy the attention of our Provincial Society. A committee from the Ontario Dental Society presenting a memorial laying before the Minister of Education the crying needs of the case would, I think, result in much good in the way of having a text-book on hygiene containing a chapter written by a dentist on the teeth and their proper care.

The Provincial Dental Society should issue a pamphlet, or series

of them, for free distribution by its members through the Province, setting forth in popular phraseology such information as the people need.

Arrangements could be made by which a properly constituted committee from this or the Ontario Society, or both, could supply a series of short articles to the newspapers from time to time, so that really valuable information can be supplied the people, instead of much of the present unreliable so-called "health notes" to be found in our papers.

This is a subject the importance of which grows on one as he thinks of it, and I hope this Society will seriously consider the propositions made.

If all the dentistry needed were done, there would be no need of alarm at the tremendous rush of students to our college, but, on the contrary, we would be unable to manage the work that would present, while to the public health no one other reform would be so beneficial.

To sum up : (1) Dental education for the people is a necessity ; (2) the physician and the teacher must be educated, that they may use their great influence intelligently in the homes and schools ; (3) the public must be reached, whether by means of pamphlets or short newspaper articles, in language easily understood. The education must come from our dental societies to be authoritative, and must in no sense advertise any one in particular.

FILLING CHILDREN'S TEETH.*

By F. D. PRICE, L.D.S., D.D.S., Toronto.

Whatever may be thought of the methods of treatment herein prescribed, they will be freely given. For if they do not fully accord with the practice of some of my learned friends they will the better stimulate discussion and bring out many valuable suggestions. I wish to confine myself to the subject of "Filling Children's Teeth." But first, by way of introduction, let me make a crusade against the too common practice of ruthlessly extracting the baby's teeth, because they cause pain. I believe that to persuade a child to sit in a dentist's chair and perhaps, under a promise to "just look at the tooth," or "won't hurt any," to tear out a tooth, is a crime not less than feloniously breaking a man's arm or some other equally calamitous injury. The man could more easily recover the use of his arm and his nervous energy than the child could recover from the injury done the lost member, the life-long

* Read before Toronto Dental Society.

dread of the dentist's chair, the lack of confidence in all dentists, and the consequent permanent neglect of the teeth. I shall not attempt to pass just sentence of punishment on such a dentist. He will get his bitter reward sometime, somewhere. Neither shall I prescribe methods of painless extraction of baby teeth. They should, as a rule, never be extracted before the time for their replacement by permanent teeth, and Nature more kindly performs this operation than the dentist usually does.

As much care should be taken to preserve temporary teeth as the permanent ones. This requires a very careful handling of the little ones. The dentist being a stranger, they naturally shrink from him. Some dentists, anyway, would make a child's blood run cold by the savage visage and gruff manners they present when a little sufferer is offered for treatment.

One mighty big preparation for the operation is to get himself in shape. His heart should be full of love and sympathy, his face full of smiles, his tongue full of encouraging words as his head is full of knowledge. He must first get the child's confidence by causing as little pain and weariness as possible, and by medicines relieve the suffering. If he succeeds this time he can easily retain a life-long patient.

First, as to the filling of temporary teeth. Soon after the age of six months, and thereafter every six months, the child's teeth should be examined. Abrasions or shallow cavities that will not easily retain any filling, especially those in the posterior teeth and above the buccal gum margins, may be treated by applying a twenty-five per cent. solution of silver nitrate. A little care should be taken by using a napkin or cotton to prevent the caustic touching the mucous membrane.

If necessary, finish the operation with an application of sodium chloride or common salt to prevent further action of the nitrate, and so prevent injury to these soft parts.

Any small cavities should be lightly excavated, their margins well trimmed and amalgam for the posterior and oxy-phosphate for the anterior used. Large cavities on the grinding surfaces of the molars should be prepared in the same way. Remove the debris and as much of the decalcified dentine as can be done quickly and without causing much pain. Be careful to trim the margins well, leaving no decay there. Apply silver nitrate or carbolic acid to the softened dentine remaining, and fill nearly full with oxy-phosphate of zinc, finishing with amalgam. Let me here put in a protest against the too common idea among dentists that fillings in the temporary teeth may be of the most temporary nature, as they may be refilled, if necessary. In this country, the child having large cavities filled may be only four or five years old, and the fillings may need to serve as many more years. If the

temporary filling soon fails the tooth may be neglected and suffered to sadly degenerate before being again attended to. Besides, if the fillings soon fail the parents lose confidence in the permanence of that particular dentist's operations. So I advise to use amalgam to protect the oxy-phosphate fillings and no preference for copper amalgam either. Large cavities in the anterior teeth are usually on the approximal surfaces:

All approximal cavities, anterior or posterior, are, as a rule, better filled with gutta-percha. The pink gutta-percha used for base plates is perhaps the best, as it can be easily, quickly and comfortably manipulated, and, because of the sulphur incorporated in it, it is antiseptic. In preparing these cavities, cut away as little as possible of the margin and excavate with small hand instruments. The engine is a savage instrument except in the hands of a very skilful and careful dentist. Apply a disinfectant in the cavity for awhile before filling. The gutta-percha should be warmed on a slab over a glass of hot water, or better, on a square bottle having hot water within. Insert in the tooth in as large pieces as can be used, quickly packing in place with instruments slightly warmed in water or alcohol flame. If two approximal cavities open toward each other, reaching perhaps quite or all together up to the gingival margin, make one filling of the two. If the teeth are close together as temporary molars usually are, do not fear to pack the gutta-percha tightly in. If it is exposed to trituration, it will the better force the teeth a little apart, a condition so desirable for causing the first permanent molars to erupt toward the back of the jaw. An approximal gutta-percha filling in the anterior tooth may be finished by drawing the smooth side of a thin polishing strip against it, first having dipped the strip in chloroform.

If a pulp is nearly exposed so that the tooth is exceedingly sensitive or if it has been exposed in excavating and is not wounded, prepare a paste by mixing about equal parts zinc oxide, carbolic acid and oil of cloves, and placing a small amount gently over the exposed or sensitive part. Over this place a piece of asbestos paper, then gently flow over this oxy-phosphate of zinc sufficient to prevent pressure being conducted from the surface filling of amalgam or gutta-percha. Occasionally it is advisable, especially in very large cavities, to finish with oxy-phosphate. A paste often used is a mixture of iodoform in glycerine.

Dr. Perry, of New York, advocates the capping of pulps in temporary teeth that have been for some time exposed, but not aching. We think in such case a very temporary stopping should be inserted, with instructions to the patient to return in a few days for final treatment. The comfort of the tooth during this interval will determine the subsequent treatment, whether it be to remove

the capping and devitalize the pulp or finish the filling more permanently.

If, however, the pulp has for some time been exposed and painful, it should be devitalized. Prepare a paste by mixing cocaine crystals, arsenious acid and oil of cloves, regulating the proportions of the cocaine and arsenic by the condition of the tooth. If very much inflamed, use more cocaine and very little arsenious acid. Put a little of the paste on a particle of paper and gently lay over the exposed pulp. Thus an application can be made that will probably allay the pain, or at least cause a very little. In about twenty-four hours, when devitalized, open into the pulp chamber and clean out the canals as far as can easily be done, being careful to not penetrate through the apical foramina. Thoroughly sterilize the cavity and root canals. Fill the canals and pulp chamber with the pink gutta-percha, before referred to. It can be forced in with pluggers or blunt probes, each succeeding particle driving that before inserted quite to the end of the root canal. When the roots are becoming absorbed, this will be found to be better tolerated by the tissues than most other root fillings, and will probably itself quite readily be absorbed. Finish with a good filling and do not leave any opening for drainage.

Often children are brought to us for treatment with a baby tooth violently abscessed, the little patient suffering extremely and afraid to be touched. Gently wash or excavate the debris out of the cavity and, if possible, without causing pain, remove enough softened dentine to gain a small opening into the pulp chamber. Into this opening pack a small piece of cotton dipped into a saturated solution of iodine in tincture of aconite. Usually it is not necessary to put any on the gum, but if any escapes from the cavity about the gum margins it will do good rather than harm. The prompt action of this medicine in such a diseased condition is wonderful. The apical foramina are so large that the antiseptic and disinfecting qualities easily reach any infected parts in the alveolar tissues and any decomposition in the tooth is quickly checked. Nature quickly responds to the stimulant thus offered, the pain is quite sure to soon disappear, the parts are healed and resume their normal vitality. The filling of teeth in this condition is not so simple as in most other conditions. Probably gutta-percha for root and crown fillings is to be preferred. At any rate, it should be some material that may be easily removed if there is a return of pericementitis.

We often find temporary teeth devitalized and yet giving no trouble. The crowns may be gone and only roots remaining. Do not extract, as Nature needs these roots to preserve the arch for the approaching permanent teeth. Nature is very kind in the getting rid of baby teeth, and if dead teeth are comfortable we may best prevent trouble by leaving them alone. A crown filling with an

opening made through the side to the pulp chamber for drainage is good practice.

We have now come to the consideration of the permanent teeth until about the fourteenth year. During these earlier years the structure of these teeth is so soft that cavities once seated soon develop and seriously hinder their preservation. The least suspicion of decay should be noted, the softened structure cut away and a filling inserted.

The first permanent molars are the first teeth usually needing attention. Gold is not recommended during this period with but few exceptions because of the soft nature of the enamel prisms, they being injured by the force necessary to insert a gold filling. One exception is in filling a dead tooth where, of course, there will be no improvement in the tooth structure. Tin foil is much recommended for small temporary fillings in permanent teeth. Amalgam is probably better, being more lasting. Approximal cavities, both posterior and anterior, if not large, should be filled with gutta-percha. In fact, the general treatment of the filling of the permanent teeth during this period is much the same as that of the temporary teeth. After the fourteenth year all cavities, as a rule, are better filled with gold. Oxy-phosphate of zinc is a treacherous filling in these early permanent teeth. It is too often suffered to entirely fail and allow the tooth to become seriously decayed before being again attended to. It should never be placed at the gum margin of approximal cavities. If it is to be inserted in approximal cavities, first partially fill with gutta-percha or amalgam and finish with the oxy-phosphate. However, it is excellent as a lining in deep cavities to prevent irritation of the pulp.

Root canals in permanent teeth should not be filled with medicated cotton. The excuse that it may easily be removed in case of trouble is very good, but trouble is apt to begin sometime and its removal be necessary. The root-filling of permanent teeth is too important and lengthy a subject in itself to be discussed in a paper of this nature, so must be lightly passed. Fill the posterior lower molar roots and the palatal upper molar roots and all roots that are easy of access as follows: With a smooth broach pass into the canal some oxy-phosphate or oxy-chloride of zinc, lining it if possible quite to the apex. Having a tapered piece of lead wire prepared, pass it into the canal, forcing home with a plugger. The lead can be compressed and will force the plastic into the remotest parts of the canal. The lead salts are antiseptic, and if the canal has before been well prepared and sterilized, pericementitis will never be likely to arise. Canals more difficult of access are better filled by forcing in gutta-percha with a blunt probe. Chloro-percha is not preferred. This concludes the most important cases in the filling of children's teeth.

ANÆSTHESIA.

By G. V. N. RELYEA, L.D.S., Oswego, N.Y.

No department of science which so immediately concerns the well-being of the human family has, within the last five decades, made more notable advance than that of anæsthesia. The fact that surgical operations could be performed without pain was a desideratum. It has robbed the operating table and the dental chair of their dread; the barbed edge of the scalpel is no longer grating upon the nerves of those who know that sooner or later they will be obliged to pass through the long-delayed ordeal. That some anæsthetic will supersede the use of electricity at the doomed death chair is only a matter of time. Even chloroform will unquestionably extinguish the vital spark if continued long enough. Why in this enlightened age should pain be unnecessarily inflicted by any corporate body—leave that to the murderer and the assassin. Ether, as an anæsthetic, was first introduced in 1845. I was then practising in Belleville, Ont. After a few trials, I was so pleased with the results that I determined to place it before the public forthwith. I soon found a patient, and convened an audience consisting of the mayor of the city, the sheriff of the county, several barristers, doctors, editors, and a druggist. Having arranged all preliminaries, I placed my patient in the chair. I had little knowledge of ether or its possibilities. I was no connoisseur, but the experience I had gave me confidence, and I ventured. I knew the utmost care was necessary, and assuming an air of confidence, I commenced the administration. It was a perfect success, and placed me at once in the confidence of the community.

Ether, as an anæsthetic, became popular, and our surgeons at once accepted it and availed themselves of it in all important surgical operations. Having become quite an expert in its administration, I was called upon, frequently, to assist. Two of our best men operated for ankylosis of the lower jaw, which proved a success. The patient was under the influence of ether for about three hours. In 1844, Mr. Colton, of Hartford, Conn., entertained his friends one evening by an exhibition of laughing-gas. One of the company, while under the influence of it, amused them by his antics, in which he severely injured one of his legs. He was not conscious of it, however, until after the effects had passed off. Dr. Horace Wells, being one of the audience, at once conceived the idea of its being used in extracting teeth, and commenced experimenting. In order to test it, he was put under its influence, and had a tooth out, which he assured them was painless. So sanguine was he that he went to Boston, was introduced.

to the surgeon of the General Massachusetts Hospital, and gave a clinic for the express purpose of demonstrating that operations could be performed painlessly. That experiment, however, was only a partial success—so much so, that the students laughed at and derided him. He returned to Hartford disheartened, became melancholy, and eventually took his own life. After his death gas was under a ban and fell into desuetude for fifteen years. Chloroform was discovered in 1847 by Dr. Simpson, of England. Its efficacy and easy administration rendered it very popular, and for the time being put ether in the shade. I adopted it, and used it for nearly two years, not for a moment suspecting that there was a dangerous element in our new-found friend—"that there was death in the pot"—when word came from Toronto that a man died in a dental chair in that city from the effects of chloroform administered for the purpose of having a tooth extracted. It came like a clap of thunder from a clear sky. Since residing in this city, I learned that the unfortunate man mentioned above was from this place.

Soon after the advent of chloroform, which was used then almost exclusively, a prominent barrister came to my office, accompanied by his good lady and their family physician, with a view of having some teeth extracted for her. After an examination, the doctor and myself concluded that the removal of the entire upper teeth was necessary, they all being past saving. I placed the forceps in condition, and the doctor commenced the administration of chloroform, and when ready I undertook my part of the operation. There were fifteen teeth and roots to be extracted, and when the last tooth was out, I turned to the doctor and husband, whom I found were convulsed with laughter, holding their sides. I enquired what they were laughing about, when they pointed to the floor where the teeth were scattered. I had thrown them in every direction for ten feet around. Our patient then amused us. First she sang a verse of some grand old Methodist hymn, then she preached a short sermon as follows: "What is the use sending B—— F—— to Parliament? He has no children. And there is that curly headed husband of mine going about the country making political speeches, and I am obliged to write them for him. We were so anxious that our last baby would be a girl, but then we could not help it." She then pronounced the benediction and came to herself.

After the sad event in Toronto, dentists were not willing to use ether or chloroform unless in the presence of a physician. In 1862, nitrous oxide was introduced again, and soon found its way into general use, not only in this country, but in Europe and elsewhere, and is just the article for dentists. I have used it for thirty-five years, and without any mishap. For protracted operations, however, ether and chloroform combined are generally used. Soon

after I commenced to use laughing-gas, a hardware merchant came in to have a tooth extracted. I gave him gas, and when I supposed he was all right I reached for my instrument, when he rose from the chair, walked over to the corner of the room, faced me, and put himself in a pugilistic attitude and looked at me with a grin. I waited a few moments, and he came back to the chair and said, "That stuff won't do for me." I gave him chloroform and finished the operation successfully. After I had been using it for some time, at the close of one of my day's work I found a bag of gas that my last patient refused to take. Knowing that it would evaporate before I would require it again, I concluded to test it myself, and accordingly took the operating chair and commenced to inhale. I continued until I lost control of my powers, and, as I supposed, heard my assistant and student, full fifty feet away in the laboratory, laugh vociferously, indeed so loud that it quite annoyed me. When I recovered, there stood my men, and in a reproachful tone I said, "What were you fellows laughing about?" They began to laugh again, and said, "It was you that laughed." They had the laugh on me.

OLD-TIME MEDICAL DENTISTRY.

By L. D. S.

I am very glad you have introduced a Medical Department in the JOURNAL, because we dentists have much to learn from medicine and surgery, and medical men are ready to admit that dentistry has made such progress, scientifically and practically, that they may, now and then, learn something from us. In my early practice in a country village, I had a great deal to contend with from the obstinacy of one of the old school physicians. He was a man who laughed at antisepsis, jeered at the gynæcologists, and who declared that there was more ignorance in medical practice to-day than in any century since medicine became a science. It had been the custom of the villagers to go to him for relief from toothache, and his great old stand-by was a hot poultice of linseed whether it was odontalgia from exposed pulp or from an abscessed root. Many of his patients carried "his mark" of his lancet on their cheeks, as witness to his practice in the swelling which occurred from his poultices. My protests would have cost me my practice, as he was a power in the village, but one day the poor old man was thrown from his waggon, and died in twenty-four hours. Since then, there have been no more poulticing and lancing for alveolar abscess in the village of L——.

These remarks have been prompted by witnessing, to-day, the necrosis of the external plate of the alveolus of the mandible, due

to his very last effort at extraction. I was away at the time, or he would not have attempted the case, having generously abandoned the care of the teeth upon my arrival. The patient's cheek was poulticed for five days and nights, and he was in bed when the old gentleman died. At present I have the case progressing nicely, and the patient is attending to his business. The accident in extraction, for such it was, was caused by the patient grasping the physician's hands, for though the old turn-key of Garangeot was used by him, his skill in its use was truly remarkable. He placed his patient on a low stool on the floor, the head was held between his legs, and the grip of the tooth, as well as of the patient, was made secure. The doctor had several experiences of fractured alveolus, and two cases of fractured jaw, but with the old key such results were not uncommon among dentists.

A MEDLEY OF INCIDENTS IN DENTAL PRACTICE.

By T. TROTTER, L.D.S., Wiarton, Ont.

On reading a recent excellent number of the DOMINION DENTAL JOURNAL, I was impressed by your appeal for contributions from dentists throughout the country, and not having made any wonderful inventions or any startling discoveries I thought I would note a few incidents and facts which have occurred in a dental practice of over thirty years.

THE POWER OF "A NOTION."

Many dentists have erred, and do err, when being consulted about supplying their patients with artificial dentures. I have frequently had ladies show me sets of teeth made by Dr. So-and-So, and say: "They are no use to me, and the doctor told me they would be as good as my own." In most of these cases the teeth were neatly made and fitted well, but the expectations of the patients had been raised beyond possible realization. Art has never equalled nature in any of its productive departments, and no person has ever, no matter how artistic the work, become fully satisfied with a set of teeth without first exercising patience and perseverance in learning to use them. I have always made it a point, when a patient has positively ordered a set of teeth, to lower this patient's expectations almost to the point of discouragement, and the result has generally been that the patient was agreeably, and not disagreeably, disappointed; but every dentist is supposed to meet with some "cranks," and those cranks often very forcibly illustrate the power of a notion.

Some months ago I made an upper denture for a young lady who was visiting in W——. I took the teeth, according to request, to the residence of the young lady's hostess, and the moment I placed them I saw they were an excellent fit, but my patron seemed to have no proper idea of the effect of placing a large foreign substance in the mouth, and although it was with difficulty she removed them, immediately after doing so, she exclaimed: "I'll never wear such a thing as that in my mouth." Just then the hostess entered the room and said, "O my dear, you cannot expect to get new teeth to suit you in one trial; a friend of mine had four sets made before she was suited." I saw the trouble that the hostess had made for me, but in as good humor as possible soon left the house, requesting my patient to give the teeth a trial of a few days. In about a week she called at my office and was a real personification of disappointment. I hit upon a short cut of getting over the difficulty and told the young lady I would take a new impression, which I did, and promised the teeth in three days. Before the end of three days I removed the polish from every part of the rubber plate, and going again to my patient I said to her, "I want to try your teeth in before I finish them." Both ladies were present, and expressing regret that I had had so much trouble, pronounced the change in the teeth admirable, and to-day there is not a lady in Ontario better satisfied with an upper denture than is my at one time despairing patient. It cannot be said that I sacrificed the principle of truth, and, "Where ignorance is bliss, 'tis folly to be wise."

WHO FIRST TRANSPLANTED A TOOTH IN CANADA?

My parents were among the first settlers in the county of Halton, between Hamilton and Toronto, and when a little boy I have heard my mother relate her experience in having a tooth extracted. An old school teacher (not by any means an advanced prohibitionist), at that time performed the functions of dentist for the settlement. My mother called on the teacher to have a first molar extracted; he placed her squat on the floor, and taking his "turn-key," with an unsteady hand, soon sent a sound molar spinning across the floor. He saw his mistake and "took out the right tooth." My mother was much annoyed, and picking up the sound molar, kept it in her hand until she reached one of the many fallen trees on the concession line. Seating herself on the tree she patiently persevered until she placed the molar in its old position, and that molar went with her to her grave at the age of seventy years.

In 1862, the manager of the Ontario Bank in G—— called upon me, suffering tortures, as he said, from the root of a lower bicuspid, the crown of which had years before been broken off below the

alveolar process. The cuspid in front of the root and the first molar had inclined towards each other, so that at their cutting surfaces they almost touched. I explained that to get the root it would be necessary to extract the cuspid, which could be replaced after removing the root. The manager laughed at my idea of replacing a tooth after its extraction, but returned early the next morning and said, "I'll get half a dozen teeth out to get rid of this — little sinner." I extracted the cuspid, after which I removed the root, and replacing the cuspid warned the manager that he would suffer some pain and tenderness for a time. The manager returned in a few days, and taking his pen from behind his ear forcibly tapped on the replaced cuspid, and after warmly shaking my hand, said, "All right, my boy." Since then I have had not a few similar cases, and have frequently partially removed "ulcerated" teeth and replaced them with success. Whether or not I am entitled to any priority in replacing extracted teeth, I do not know, but it was many years after the operation which I have described that the subject was exhaustively discussed at dental conventions, and in dental journals.

EXFOLIATED BONE.

The specimen of exfoliated lower maxillary bone, which I herewith send, I removed from a niece of a prominent Canadian missionary who lost his life in the North-west. Without entering into a technical description of the case, I may say that the whole trouble was caused by some "ulcerated" roots. The little girl was about eleven years old and of a highly nervous temperament. After she began to suffer she was attended by two physicians, who pronounced her to be suffering from *throat disease* and *brain fever*. The swelling was so extended that the child had to subsist on fluid nourishment, and for several days was deprived of her senses. You will understand that I cannot give you the details of the case when I say that the child was brought to me after she was able to walk about. At that time the muscles of the left cheek were quite contracted and rigid, but on carefully forcing the mouth open I found the piece of bone completely detached from the maxilla, and the surrounding tissues and remaining portion of the maxilla in an advanced state of granulation. You will observe that the piece of bone has carried with it the twelfth molar and I suppose has caused considerable alteration on one side of the face.

The case emphasizes some remarks you made in the last JOURNAL in reference to medical students and practitioners more fully recognizing the fact that the dental process is one of the most important parts of the human organism. I felt somewhat for one of the child's physicians, on the day I removed the bone. After removing it the mother was examining the bone by my office

window when one of the doctors happened to be passing up the street, and the lady seeing him, rapped on my window and called him up. She met him at the door, bone in hand, and, not lovingly, said, "Doctor, there is your brain fever." Had the case come to me at an earlier stage I could be able to write a more interesting and perhaps to some a more instructive account of it, but I trust the meagre recital and the specimen will afford you a text.

I am afraid I have made a very poor attempt writing my first article for a dental journal. The fact is I am built on a very pronounced bullish Canadian model, and having indulged in scribbling on political and other every-day subjects, I have drifted into the habit of writing in "the language of the people." I'm afraid my article will not suit the tastes of those dental writers, who run a serious risk of accident, by hanging upon their lower maxillaries the latest editions of our medical and dental dictionaries.

I despise unnecessary egotism, but I want to say a word in regard to dental ethics. In my professional career, in advertising and in my dealing with patients, I have endeavored to run as close as possible to the recognized code of dental ethics, but many times my resolutions have received rude shocks. Time and time again I have had around me dental graduates, doctors whose methods of "advertising," and their plans of dealing with patients, would rival the most enterprising proprietor of any patent medicine. About two years ago I read in the DOMINION DENTAL JOURNAL an article by a contributor, very warmly thanking the editor for being the means of converting him to the code of dental ethics. I happened to pick up a paper published in the town where this contributor practised, and was not a little surprised to find about an eighth or a quarter of a column given to the contributor's dental "advertisement," wherein he set forth his claims and wound up by saying "Best sets of teeth at \$5.00." Dental ethics is a fine subject on paper, but if the authorities who confer the title of "doctor," do not more fully impress the recipients of the distinguishing mark with the importance of carrying out the true practice of dental ethics, the reform will be very slow and meagre.

Correspondence.

"CAPPING NERVES."

To the Editor of DOMINION DENTAL JOURNAL :

DEAR SIR,—I find in April issue of the JOURNAL, at page 100, an article on "Capping Nerves," which is misleading, and to outsiders might lead to the impression that in Ontario the majority of dentists were wanting in skill and enterprise in this connection, when we know the opposite to be the fact. There is no cause for anxiety on the part of anyone in regard to the recent graduates or those to come later on, because they are taught intelligently and have the natural ability to select the fittest methods and apply them with discretion to the case in hand, and the older or not recent graduates are no doubt using a discretion taught by long experience and their failures and successes with many patients when and how to cap or not to cap nerves. This applies at all events to those who are operators and not plate work advocates.

The notion of "indiscriminate slaughter of nerves" and "dead men and no tales" is an exaggeration. I remember making use of this term but applied it to the indiscriminate slaughter of the natural teeth to replace them by artificial, and it may be possible that I have used the term indiscreetly and have been misunderstood. As my name was used in my absence at the meeting of the Ontario Society here last summer, I have taken the liberty of writing you not in answer to the article above quoted so much as to serve, if possible, the good end in view of ventilating the subject still farther, although there are several points I do not agree with in the paper read. Every dentist has a conscience (except the "catch penny"), he also has judgment. If he uses his judgment his conscience may be safely left alone and need not trouble him. If he attempts to use his conscience and the patient's judgment or inclination or ability to pay, there may be a conflict in which scientific ability, skill and experience do not figure to the extent that we might think proper. The matter of fees, I apprehend, is generally left in abeyance until the judgment part is settled, and should have nothing to do with the final conclusion of the course to be pursued.

Intelligent patients appreciate satisfactory results and pay for skill and good judgment, and try to get it as cheaply as possible sometimes, but when this argument is advanced as one likely to influence the line of procedure, my conscience is going into rebellion and is out of the consideration.

I may be out of touch with advanced ideas on the subject

of "capping nerves," but I must claim the right of using my own judgment and experience in any case in hand, not subscribing to a hard and fast rule to try to cap every nerve in the hope that it may add a year or two to its life, or even more sometimes. There is a probability that the writer and myself are at one and the same in our object so far as capping nerves go, and possibly practice daily after the same manner, but I never cap a nerve that comes to me in a congested, disorganized condition which will require extended treatment or restored intra-canal wall and metal plug. In a case where there is wall enough to prevent actual contact with very little congestion and no exudation or infiltration, and age and vitality warrants it, I might try the experiment with reasonable hope of success, but after the age of say full maturity, there is very little to choose between the two processes with expert root-fillers and cappers. There is no doubt that a tooth can be made as useful and as durable as the others in most cases (not always so) generally; but this is no argument to prove that it ought always to be devitalized, and is never treated so, I apprehend, except as a last resort, and not a leading principle without discrimination, as we have been led to believe.

In the matter of actual capping, if I were to determine to do so as I am frequently compelled to, I would proceed somewhat as follows, always using the dam and calling your attention to the "somewhat," first as meaning that in ten different cases there might be as many variations—no hard and fast rule or patent right, original and only way; if the nerve is painful a slight touch of cocaine or other anodyne, followed with germicide generally applied to the cavity and a touch of ethreal gum direct or on paper, oiled silk, goldbeaters' skin or court plaster, and this covered with zinc oxide and sulphate or chloride, oxy-phosphate or any mild, quick-setting cement that would resist pressure and avoid any metal plug for many months, filling to the surface with a plastic cement of the time-serving variety.

If it were any object to save a nerve that had become slightly demoralized (disorganized if you prefer it), in which pus were present or a weeping of serum, I would not hesitate a minute about applying pyrozone of 5 per cent., or 25 per cent., in preference to anything else, and follow with creasote and cap when convenient (at once or after) and expect good results; but as implied before, I can see no great good to be obtained by doing so, as far as usefulness of the organ is concerned in general, but in isolated instances might be expedient, and have not the slightest objection to anyone doing so, particularly if conscience says so or experience in root filling is not his forte and capping nerves is.

Take into consideration the extremely sensitive and delicate nature of the organ in question and imagine a material of the

texture of any of the cements in contact with it to the extent of a pinhead or a grain of shot, and follow with fair reasoning and without any prejudice the natural and logical conclusions we may arrive at. If we use oxide of zinc and creasote there is not likely to be a resistive setting sufficient to prevent pressure, and that may be fatal. There is also going to be absorption of serum by the oxide, and it will then cease to be antiseptic and become irritant. I would prefer placing a smooth non-irritant substance of fibrous nature over the point of contact and a little larger than the exposure, and follow with a varnish or cement or both. It might be as well, perhaps, to add a word of caution in regard to the use of 5 per cent. or any other strong drug to the nerve-tissue. I am not to be understood to mean that they can be used in full strength and in any quantity, and a grave mistake may be done in doing so. A touch of one may be safely used while a hundredth part of a drop of another may be fatal, and in many cases dilution is advisable.

N. PEARSON, L.D.S.

OUR NEW YORK LETTER.—No. II.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—Greater New York is now catching its breath from the tiring exertions of the Grant festivities, which have been simply immense. Likened somewhat will be the Queen of England's Jubilee. Greatness in the thought of man is becoming greater day by day. But man, whatever his aspirations, must, sooner or later, cease to be an occupant of earthly activities. No trio of men have been more before our calling than Heitzman, Abbott and Boedecker; but the two first are absent from their earthly places, Heitzman in January, and Abbott this present month suddenly, at the age of sixty-one; and Boedecker is in failing health. They have all been industrious, and their books are in the libraries of our literature, and these will be measured by the intelligence of the future. The position that Dr. Abbott has occupied in the New York College of Dentistry has given him a very large contact with the future portion of our profession, and what it will add of wealth to our merit the coming days must only record. There has been a good deal of commotion concerning the future of the college. Some say it has been only a family matter. Pity that it should have found so much publicity in the newspapers. It is said that Dr. Maxfield did not know what he was talking about when he ventilated what he thought he knew before the Massachusetts Society, and then found a publication of his statements in the March number of the *International Dental Journal*. We believe that the colleges do owe a certain amount of accounting to those that are interested in the future welfare of our calling. We believe a good deal in the inward

good purposes of those that make up the college instructors. Yet, there is so much that is in need of correction that we emphasize that the congress of faculties and the Board of Examiners owe a vast deal to be manifested of wisdom that has yet come to light, and we predict that the time is not far distant when it will become manifest; that such pressure will be put upon those made responsible by the position they occupy that they will not be able to resist it. But this is not all. The associative bodies have a responsibility in a conduct of society management that will augment for good in the direction of progress. There was never such signs of degeneracy of professional lines as now. This is seen by the great increase of attractive establishments all through Broadway, of our city. We say, attractive. Yes, by the quarters, and the lavishing with gilt lettering of promises given for all kinds of crowns, bridgework, and et ceteras. It is no more so in New York than many of the large cities. We think much could be found in the facts that have been thought to exist, that there are great commercial advantages being secured in other directions, and that there was a short cut by which the ducats could be secured, possibly in a quicker way. It was thought—by some—that legislation would be a protection from these incursions, but it does not so prove, and we do not think it will. Bona-fide intelligence will only mark the discrimination last, by the profession first, and the public will follow in proportion as they see the demonstration of superiority manifested. The financial question was never so much agitated in New York by dentists as now. We are not in it; we are content to try and faithfully give such service as the forty-five years' diligence has enabled us to render, and live in gratitude that it is so well. We often hear it remarked that no such fees as formerly can be secured in New York. In some measure this may be true. We do not think it should be so among skilful men. Is this true of skilful surgeons, oculists, aurists, dermatologists, and et ceteras? We think a little questioning on the part of some, "Have we honorably sustained those that have sought to establish just fees along professional lines?" "Are we a liberal profession?" Not altogether yet; not even "stomatologists." Possibly they will help to bring about hoped-for better times.

Report says that Dr. Boedecker has an imperial call from the Kaiser's family, Berlin, Germany, for professional services. We are glad if it is so. Most any of us would breathe quicker if some day a cablegram should come from any of the potentates of Europe inviting our services. We think we would try and arrange to go. We do not know of any American dentist in this country receiving such a call. We are quite sure it—if so—would have got out. Doubtless, Dr. Evans stands at the head of the list for royal

patronage. We have understood that Dr. Sylvester has had at least some of the German royalty. He is an American dentist in good standing in Berlin.

These things do emphasize a man's position some, in the estimation of the world. Doubtless not a little ambition is generated at Washington, every new administration—as to who will get the President.

The late Dr. Abbott had the honor of extracting the teeth of our much honored Grant, when he was a victim of cancer; but how much more honor it would have reflected upon some dentist had his mouth and teeth been kept from the destructive "Riggs' disease," that was making worse progress as far as the time of his presidency. When he was in the hands of the late Dr. Wordsworth, and on a visit to the doctor's office, he called our attention to the General's teeth and mouth; then every tooth was standing in a pocket of pus. Why was he not attended to? We were not asked to attend to the case, but we do not hesitate to say that we could have given him a clean bill, and more, that he would never have had a cancer so long as it had been kept so. Every true doctor knows that such a condition of teeth and mouth as General Grant had would only invite a larger disorder. These things speak loudly of our value to the public. Intelligence can only lift us to our merited place. This must be first and foremost; other things may assist, that is all. Only the power of a second Atkinson could break the power of this age, which is, first and last, political and commercial, the first for self, the second for the gain that can be gotten out of the situation. We do not think true professional men should be at all exercised over the strife for self and gain. We ought not to desire only patients that rightfully belong to us because we are qualified to serve them. Dr. Atkinson was wont to say that not a few practitioners had patients that did not belong to them, and more than they could righteously serve. One thing is true, that too many do not rightly appreciate their possibilities for qualification. The ambition to be "the best dentist living," does not actuate enough of our calling. Every man that feels that he is the "best dentist living" (according to the light he has had) can justly demand and command a maximum fee from those that are able to give it, and for the rest he cheerfully serves the remainder for what their circumstances will permit them to give. This has been our rule of practice from the start and will be to the finish. We have monied patients that have never questioned our fees, and their mouths and teeth testify in our favor by results. So we have the same to show by the less favored. We see a good deal of "high grade" on milk carts and bakeries and et ceteras, and we think that it should be our thought even that our standard should be "high grade."

Pardon us for one allusion. The *British Journal* for April 1st wonders how we should know concerning Dr. Leon Williams' practice, and they would not even know they could know. Well we are Americans, and of the "Yankee" origin, and they are known the world round as "good guessers." That explains it; "a real Yankee gets there," and the more the opposition the more sure he is. We wish the Englishmen would come over and see us, more of them and oftener, and see our office buildings with one hundred and fifty practising side by side.

GREATER NEW YORK.

New York, April, 1897.

Question Drawer.

Edited by DR. R. E. SPARKS, M.D., D.D.S., L.D.S., Kingston, Ont.

Q. 30.—What is the difference between adhesion and atmospheric pressure applied to the adaptation of sets of teeth?

A. Adhesion is the force in virtue of which one body remains attached to the surface of another with which it is brought in contact, hence this is the main underlying principle, which is never ignored by the rational dentist in adapting artificial plates. Atmospheric pressure is the well known weight of the atmosphere appropriated by extracting the air from a chamber in the surface of contact of the plate, which accomplishment and stability are so doubtful that it cannot be relied upon, hence should be abandoned on account of its lessening the surface of contact, thereby impairing the adhesive force. T.

Q. 31.—How do you calculate percentage solutions?

A.—1. A recent issue of the *Medical Brief* gives the following: "The calculation is based upon the number of grains of water in a fluid ounce; exact weight, 435 grains. Multiply this by the percentage desired; or in other words, take one grain of the drug for every hundred grains of water. Thus, to obtain a 4 per cent. solution, multiply 435 grains by four, which gives $18\frac{2}{10}$ grains, or, roughly speaking, 18 grains to the fluid ounce of water."

G. W. B., Montreal.

2. One grain of drug added to 100 minims of water gives a one per cent. solution, or $4\frac{4}{5}$ grains added to one fluid ounce gives the same result, as there are 480 minims in an ounce. Having this as a guide it is easy to calculate any percentage. Practically a minim is the same as a drop, though to be absolutely correct a drop is greater than a minim. In counting drops use a druggist's

dropper, which consists of a small glass tube, having a rubber bulb attached. This article can be purchased at any drug store, and costs about ten cents.

E. A. RANDALL, Truro, N.S.

QUESTIONS.

Q. 32.—Tell a young dentist how always to get a correct bite.

Q. 33.—Give a recipe for a solution to relieve the after-pains of tooth extraction.

Proceedings of Dental Societies.

ONTARIO DENTAL SOCIETY.

The Ontario Dental Society will hold its ninth annual meeting at Toronto, July 13th and 14th. A good programme is being prepared, and a cordial invitation is extended to the profession to be present.

W. A. BROWNLEE, *President*.
G. S. MARTIN, *Secretary*.

DENTAL ASSOCIATION OF THE PROVINCE OF QUEBEC.

At the last meeting held in Montreal the following gentlemen received the license: Messrs. E. Giles, G. Kent, W. Waters, J. Saucier, I. K. Macdonald, D. J. Berwick. The examination for the degree of D.D.S. by the College resulted in the success of Messrs. I. A. Munro, W. S. McLaren, D. J. Berwick.

VERMONT STATE DENTAL SOCIETY.

At the twenty-first annual meeting of the Vermont State Dental Society, held at Montpelier, March 17, 18 and 19, the following officers were elected for the ensuing year:

President, Dr. C. S. Campbell, St. Albans; First Vice-President, Dr. J. A. Robinson, Morrisville; Second Vice-President, Dr. K. L. Cleaves, Montpelier; Recording Secretary, Dr. T. Mound, Rutland; Corresponding Secretary, Dr. Grace L. Bosworth, Rutland; Treasurer, Dr. W. H. Munsell, Wells River. Executive Committee, Dr. H. Turrill, Rutland; Dr. C. W. Steele, Barre; Dr. J. E.

Taggart, Burlington. State Prosecutor, Dr. G. W. Hoffman, White River Junction.

Next meeting to be held at Rutland, the third Wednesday in March, 1898.

THOMAS MOUND, *Recording Secretary*.

AMERICAN DENTAL ASSOCIATION.

The American Dental Association will hold its next meeting at Old Point Comfort, Va., Tuesday, August 3rd, 1897. This will, probably, be the most important meeting of the American Dental Association held in years, as it is expected that the entire question of reorganization will be presented for settlement. It is, therefore, earnestly desired that each organization in affiliation with the American will make a responsive effort to have a full delegation present at Old Point Comfort, and have this representative body instructed in regard to the position held by your Society in relation to this question.

It is further suggested that each Society should devote, at least, one evening to the discussion of the question: Whether a change in the relations of the two so-called National bodies, the American Dental Association and the Southern Dental Association, be desirable? In this way thought may be crystalized, and each delegate be prepared to meet the subject with the intelligence its importance demands.

Each State and local Society which has adopted substantially the same Code of Ethics as that governing the conduct of members of the American Dental Association is entitled to one representative for every five members and fractional part thereof.

Blank certificates for delegates may be had on application to the Corresponding Secretary.

By order of the President, Dr. James Truman.

EMMA EAMES CHASE,

Corresponding Secretary American Dental Association.

April 16th, 1897.

QUESTIONS SUBMITTED FOR DISCUSSION BY LOCAL SOCIETIES.

FORMULATED BY THE COMMITTEE APPOINTED BY THE AMERICAN DENTAL ASSOCIATION.

I. Pyorrhœa Alveolaris; what is it and how many varieties are there? Are all local in origin or constitutional, or both? What is the treatment, local or constitutional, or both? What may be regarded as a cure? Is the disease likely to recur?

2. *a*—What is the cause of dental caries? *b*—Why is caries so much more active in some mouths than in others? *c*—What changes take place where caries ceases its activity in mouths heretofore predisposed? *d*—Are there recognizable signs by which we may know whether or not caries will cease with advancing age?

3. To what extent are we justified in giving our patients systemic treatment?

4. To what extent and when, are we justified in using cataphoresis? Is there danger of injuring the dental pulp or other tissues by its use?

5. What can we do to increase the attendance at our dental societies?

6. In view of the recent investigations, has amalgam been a blessing or a curse to humanity?

7. Are there any proofs that the mercury in amalgam fillings is injurious to the health of the patient?

8. What are the best materials for filling teeth and the prospective durability of fillings in different cases?

9. What are the best methods of bleaching teeth?

L. P. BETHEL
A. W. HARLAN
J. N. CROUSE. } *Committee.*

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

MR. HEATH, writing on "Honeycombed and Syphilitic Teeth," in *London Dental Record*, says: "Syphilis usually hastens eruption of the teeth, the temporary incisors being occasionally erupted at birth destitute of roots, but only in a very small percentage of cases does it produce the characteristic malformation we are considering. It is a curious fact that when ulceration of the palate occurs as a result of congenital syphilis the teeth nearly always escape."

WE had always been of the opinion that toothache was the same torturing malady the world over. With Burns, we believed it to be the "hell o' all diseases." If we might judge from a late order of the Director-General of the Cantonal Post, the kind Geneva letter-carriers and other employees of the postal depart-

ment in that part of Switzerland have must be of a different type. All such employees are warned that hereafter if they absent themselves from duty because of toothache they will be scheduled under "Absences for pleasure and preventible irregularities." If Swiss toothache is a pleasure, we wish they would exchange with us and take some of ours.—*Editorial Note in Amer. Med. Surg. Bulletin, April 25, 1897.*

CONGENITAL TEETH—THREE CLINICAL CASES.—Dr. J. W. Ballantyne (*Gaceta Médico Catalana*, Dec. 15, 1896) concludes an article on this subject as follows: 1. Congenital teeth form a rare anomaly, which for a long time has been known to physicians and the laity. 2. Their presence exercises an evil effect upon lactation, in part by the effect of the imperfect occlusion of the child's mouth and in part by wounding the mother's nipple; it can also originate sub-lingual ulceration. Infantile diarrhœa and general atrophy are the most remote consequences. At times, however, the symptoms are absent. 3. Congenital teeth have little or no prognostic significance as to the corporeal or mental vigor of the child that presents them. 4. The teeth usually found are the lower incisors—at times the upper incisors—and very rarely the molars of the inferior or superior maxillus. 5. In some cases we have a history of heredity. 6. As congenital teeth ordinarily are incomplete and badly developed, and apparently are inconvenient rather than advantageous to the child, it is recommended to practice their avulsion shortly after birth—an operation which can be easily executed excepting in very rare cases, and which is free from complication. 7. The appearance of premature teeth in certain well-known historical personages is an interesting fact, whose importance on the other hand has been greatly exaggerated.—*Amer. Med. Surg. Bulletin, April 25, 1897.*

A LARGE MOUTH CONCRETION.*—Mrs. G., æt. 32, consulted me in September, 1896, for a large growth of long standing, which had filled up the right buccal cavity and had caused ulceration through the upper lip and great deformity of the face. The history was as follows: At the age of twelve years she had suffered from "fever," which had lasted a considerable time and had been followed by a slow convalescence during which, she stated, that the teeth in the right side of the lower jaw had become loose and dropped out one by one, but without any pain or ulceration of the gums. The teeth had all dropped out in about six months, and then she began to notice a shell-like mass on the gums from which the teeth had fallen, apparently in the area occupied by the

* Shown at the meeting of the Montreal Medico-Chirurgical Society, October 16th, 1896.

molar teeth. For ten years this growth was gradual and gave her practically no trouble. Then deformity of the face began to be noticeable and increased steadily. It was, however, only within the last year that marked increase in the size of the mass had been observed and troublesome symptoms had developed. On examination, the growth was found to fill the whole right cheek and to have produced great flattening of the right side of the face and the right nostril. It had ulcerated through the upper lip at one point, and the whole lip was greatly swollen. The point which presented at the angle of the mouth was evidently calcareous, but I mistook this for a simple coating of calcareous matter. The fetor was horrible and the mouth was so sensitive that no manipulation was possible. I looked upon it as a growth from the upper alveolar border, probably originally of the nature of epulis, but having recently (coincidentally with the history of rapid increase in growth and symptoms) become malignant, and advised removal of the upper jaw. She went home, but returned and was admitted to the hospital on October 12th and prepared for operation on the 19th. When she was fully anæsthetized I was able for the first time to make an examination of the mouth. I then found to my surprise that the mass consisted simply of a large concretion the size of a large hen's egg lying free in the mouth, having formed a cavity for itself by displacement of the soft parts and absorption of the alveolar border of the lower jaw. It was so large that I removed it with considerable difficulty. A couple of teeth were embedded in its lower border, and it was clearly an enormous growth of "tartar" from the teeth. The ulceration of the mouth and lip healed rapidly, and the patient was discharged in a week quite well, except for the deformity which had occurred during the growth of the mass. The mass, which was oval in shape, measured $13\frac{1}{2}$ cm. in its greatest circumference and 11 cm. in its smallest circumference.—*James Bell, M.D., Surgeon to the Royal Victoria Hospital, in Montreal Medical Journal, April, 1897.*

THE JUDICIOUS EXTRACTION OF THE FIRST PERMANENT MOLAR.—The medical profession have so many opportunities of instigating this treatment that its value may be demonstrated and insisted on. These teeth are often found the only defective ones in otherwise healthy mouths; their calcification commenced several months before birth, the proper completion of this function is liable to disturbance both by deviations in health of the mother and the many ailments of early infant life. Imperfect calcification of the teeth cannot be repaired after birth by medical treatment and intelligent diet and care, as rickets and many other infantile troubles, hence that susceptibility to decay now so prevalent. In the mouths

of the young the first permanent molar is frequently found to be largely decayed, with commencing cavities on right and left, originating cavities in the contiguous teeth. It is obvious that the removal, with an anæsthetic, of the first permanent molar rids the mouth of three cavities, and by exposing the commencing cavities retards or arrests their further decay, and, what is equally important, renders their treatment by filling easy and effective, and obviates the pain, of which the young are naturally intolerant, of the preparation for filling of cavities difficult of access between crowded teeth. As there are four first permanent molars, their removal rids the mouth practically of twenty cavities. Overcrowding and the disfigurement of prominent and projecting front teeth are much modified by the removal of these molars in youth.—*W. Whitehouse, L.D.S.Edin., Consulting Dental Surgeon to the Royal Hospital for Women and Children, etc.*

Abstracts.

Edited by G. S. MARTIN, D.D.S., L.D.S., Toronto Junction.

WHY do some dentists dress in imitation of the barber or the bar-keeper? Give it up. Some things are as hard to understand as the Scotch dialect.—*Western Dental Journal.*

DANGER IN CATAPHORESIS.—The danger of cataphoresis lies not in its application to the patient, but in the ease and boldness with which the dentist can operate. If he be careless he could easily penetrate or expose the pulp, not eliciting any pain; he might be careless and not protect the pulp.—*Dr. Buxbaum, Dental Cosmos.*

STOP it, gentlemen, right off! We mean the manufacture of disks from paper whose sand or grit is made to adhere by means of fish glue. This kind of sand-paper is bad enough when used in the laboratory, but when heated, as are disks, in the mouth, it develops a rankness fully capable of driving a dog out of a tan yard.—*The Odontographic.*

TO REFIT RUBBER DENTURES.—Scrape or file the palatal surface of the old plate; use mixture of thin plaster and replace the plate in the mouth; close teeth tightly together with plate in place; varnish the impression as usual; flash, and pour the impression; separate the flash; remove thin coat of plaster; then roughen the plate and pack enough rubber to fill the space.

TO MAKE A PERFECT CAST.—Marble dust and glycerine—about 4 ounces glycerine to a quart of marble dust—makes a beautiful cast. I have been using it for a long time, and like it better than anything else I have ever tried ; in fact, can find no fault with it.—*Chas. P. Grant, Dental Office and Laboratory.*

To add gold to an old gold-filling when a tooth has broken, leaving a gold filling otherwise in good condition. Cleanse the surface of the filling with alcohol and chloroform, and dry with bibulous paper and hot air. Anneal the surface with the flame from a minute ball of cotton on a probe dipped in alcohol and ignited, heating as hot as can be borne by the patient. Then pack new gold on the surface, the union between old and new gold being indistinguishable.—*Dr. J. Wilson Moore, in Cosmos.*

LOW FUSIBLE METAL.—Dr. R. Mathew makes a low fusible metal which melts below the boiling point of water, and is very hard. It is composed of forty-eight parts of bismuth, thirteen of cadmium, and nineteen of tin. It melts at so low a temperature that it can be packed with the fingers. A common plastic impression can be taken to the laboratory and poured at once without waiting to dry—can even be poured in water, for counter-dies use common modelling compounds. Soften and place it in a ladle, and place the die on it and drive it with a plunger and hammer ; then place the plate on the model and swedge it in the counter-die after it gets hard. Do this three or four times, but this will not draw it close enough : now use shot in the latter part of the process.—*Cosmos.*

SURE CURE FOR FELONS.—I wish to give the readers of the *Digest* a sure cure for felons—that is, taken in the incipient stage. A felon, as you know, is many times caused by burns, bruises, and the like, and very often by the long continued and constant pressure of small instruments, making dentists very prone to them. The first sign is a little sore point under the skin, feeling as if a needle-point or piece of glass had become imbedded there, and tender to pressure. Then go to the druggist and get a fresh piece of "fly blister," one quarter inch square, place it over the tender spot and hold firmly in place with court-plaster. Put it on before retiring at night, and in the morning a blister filled with serum will be present. Remove the fly blister, prick the blister, letting the contents out, then protect the sore spot for a few days and you will escape a felon. I have found this to always be a sure cure, if used in time, and no harm is done if a sore spot is wrongly diagnosed as a felon.—*F. J. Fessler, D.D.S., in Digest.*

Reviews.

Compend of Dental Pathology and Therapeutics.—By HENRY H. BURCHARD, M.D., D.D.S., Special Lecturer upon Dental Pathology and Therapeutics, Philadelphia Dental College. Pp. 138. Philadelphia: The S. S. White Dental Manufacturing Co. 1896. Price \$1.75 net.

The idea of just such a work for students has often occurred to many teachers. Mr. Oakley Coles issued in London, Eng., twenty-one years ago "The Dental Student's Note Book" covering very succinctly his lectures on Dental Pathology, and Prof. Gorgas' works are well known; but this volume of Dr. Burchard's has special merits which in a measure the others lack. It will remind the medico of the old college "Ludlow's Manual of Medical Examinations," and a veritable *pons asinorum*. Much may be said in favor of such works: something may be said against them. Dr. Burchard distinctly says that his volume "is not prepared as an aid to students in memorizing answers," but to represent guiding principles. Students who cram for exams will have this book if it costs them their dinner for a month. But there are hundreds of wiser students in and out of college, who are all at sea on the principles of this work, and who will find it a mental crutch or an inspiration to further study, just as they take it, and that is saying a good deal. The facts, so far as the science of dentistry can claim to have reached verity, are up to date. For one who is not a careful reader and who is not fond of research, this volume will be a great help, because it is the result of much study on the part of the author, and will save a lot of reading. For one who loves the scientific literature of our profession, this work will make him hungry to know more. If he faithfully reads this, he will be sure to go further and read more.

A Practical Treatise on Mechanical Dentistry.—By JOSEPH RICHARDSON, M.D., D.D.S. Seventh edition. Revised, enlarged and edited by George W. Warren, D.D.S. 691 illustrations, many of which are from new and original drawings. 677 pages. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1897. Price \$5.00.

One can obtain a suggestive idea of the progress of dental prosthetics, by comparing the first with the present edition of this valuable work; not only in the abandonment of practice and principles which in their time were highly extolled, but in the

evolution of more modern methods. The reproach of vulcanite still continues, but the author anticipates that in the "not distant future," a better base will take its place. The introduction of vulcanite made the practice of prosthetics so easy that it brought into the profession an inferior class of dentists, and even caused some degeneracy among the better class. One of the best blows that could be aimed at the quack and the cheap advertiser would be to convince the public that this filthy non-conducting base is only used by respectable dentists, as a rule, under protest. The base most desired would be one that could be used with plain teeth. Not much that is new can be added to the subject of the vulcanite base, but the *rationale* of the process of vulcanizing, which is generally a bug-bear to students at examinations, is very clearly discussed in a long extract from a paper by F. Alb. Boeck, of Berlin. The author fairly well covers the ground of fuels, appliances, metals, alloys, etc., while the treatment of the mouth preparatory to the insertion of artificial dentures, the materials and appliances used, and the entire routine from start to finish are very comprehensive. The author gives importance to the subjects of irregularities, defects and the appliances used, and concludes with a chapter on electricity and its application to dental mechanics. The work of the publisher is above the average, the paper, type and illustrations are beautiful. It is a welcome relief to find so many original illustrations. Altogether the work is well worthy of the highest commendation.

THE history of the Bubonic Plague is told, and its nature described, in *Appletons' Popular Science Monthly* for May, by Prof. Victor C. Vaughan, of the University of Michigan, who also considers the conditions that contribute to its spread, and presents the results of the latest studies of the bacillus by which it is supposed to be engendered.

"Is there danger of the plague being imported to this country?" "Yes," Prof. Victor C. Vaughan answers in the May number of *Appletons' Popular Science Monthly*, "there is danger, but this, being foreseen, may be easily avoided." No effective treatment of the disease, however, which is a septicæmia, is known. Professor Vaughan's whole article is a valuable contribution to the knowledge which the public is seeking of this fearful disease.

Dominion Dental Journal

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VOL. IX.

MAY, 1897.

NO. 5.

"DEPARTMENTAL" DENTISTRY!

Among the newest additions to the degradation of dentistry in Canada and the United States, we have to add its practice by regular licentiates in the departmental stores! Competition and over-crowding in a profession forces their meanest elements to the meanest work, precisely as it does in trade and commerce; and as there are monopolists in business who would ruin their rivals as light-heartedly as a thief would pick a pocket, so there are miserable dentists ready to hire out their personal and professional decency, in a fraternal union with barbers and butchers, under the pay and patronage of a departmental store. The splendid attitude of the *Star* and the *Saturday Night* of Toronto with respect to the commercial octopi of Yonge and King Streets should have the united support of the dental profession not only in the Queen City but in every town and village of Ontario. We have already had practical proof of the readiness of the monopolists to ruin not only every other branch of the retail business for their own aggrandizement, but to degrade the respectability of our profession. The conditions to make the practice of dentistry everywhere in Canada much more exacting and barely remunerative, already exist, by reason of circumstances which the Boards and Colleges cannot, it

seems, very easily ameliorate. But if its practice is to become a catch-penny adjunct of store-keeping, we had better face the music and either get out of the profession or get into trade. If those who never co-operate with the workers had but done their duty in the past there would have been little or no possibility of this disgrace upon our diplomas. As there are incipient criminals who are only deterred from blossoming into full blown scoundrels because of their fear of the penitentiary, so there are here and there dental licentiates who would retail whiskey over a bar in the intervals of practising dentistry, did the law permit them. The personnel of our Canadian profession is, as a rule, equal in educational and social standing to any in the world, and it is a great misfortune that the Boards have not the fully recognized power to revoke the license of the few scallywags who jockey in practice, and use their parchments as a means of serving their low instincts. Every respectable dentist who is not an active supporter of our associative labors might just as well be classed among the evil-doers. As we before remarked, to do nothing for the spread of ethical principles is equivalent to taking sides with those who do everything to undermine them. The inaction of many of our otherwise worthy members may yet deprive us of the best of our privileges, and give full swing to the new additions to our degradation.

We urge our profession to co-operate with the efforts made by the *Star* and *Saturday Night*. They can do it by refusing to buy at the departmental stores. If they want goods cheap, they can get them just as cheap elsewhere, and if they like to be swindled, they can get that too without patronizing hypocritical professions of honesty.

A BUSINESS EDUCATION.

In our last issue, Dr. Gardner, in a very interesting paper, "Is a business education not necessary to the professional as well as to the commercial man," touched upon several points of very great practical importance to the financial future of the profession. It is an undoubted fact, that as a rule, professional men are specially distinguished by their sublime ignorance of business principles, and learn too late by costly experience, elementary rules of conducting business, without which even the street-corner vendor would be a failure. It is almost a pity that the professions are open to practice to candidates under twenty-five years of age, because young men who have just entered their teens, however clever and infallible they are, must necessarily enter upon the

responsibilities of practice absolutely ignorant of business ideas. The suggestion to add a business education will meet with opposition from such kids as the students who induced the Quebec Legislature to knock off a whole year from the four years' qualification, and from those shining lights who want to give assistants who will not have their qualifications tested by the Canadian Boards, certain privileges of practice. The suggestion, however, is one which must commend itself to all serious and honest men, and one which should merit the gratitude of students. In the case of one of our own students in whom we had a special interest eight years ago, we put him through the Business College, with substantial results every day since in his career as a medical and dental graduate. There is no reason why Dr. Gardner's suggestion should not assume something of a more practical form, and we would strongly urge the advisability of adding graduation in a Business College to the dental matriculation.

THE NEW TARIFF.

Our readers and our advertisers will be glad to hear that the new tariff in Canada has placed all dental and surgical instruments on the free list. Mr. Fielding said: "We give the dental and medical professions a boon which the younger and less wealthy members of the professions will appreciate, when we put all surgical and dental instruments on the free list." This, however, does not seem to apply to chairs, and other such dental furniture. The duty on artificial teeth remains at 20 per cent. It would have been only justice to have placed teeth on the free list, as they are not manufactured in Canada. However, half a loaf is better than no bread, and we expect that our friends, the manufacturers, who so generously do their share in helping us to maintain a journal, will reap a large benefit from the privilege of free trade in instruments.

A GOOD IDEA.

At a recent meeting of the Chesley, Ont., School Board a resolution was passed appointing Dr. W. A. Crow to examine school children's teeth and make a report to parents.

CORRECTION.—For solid gold crowns, in Dr. Sparks' article in last issue, read "solid gold cusps."

HOW TO WRITE A PAPER.—Scratch out your introduction and begin where the subject really begins ; condense the body of the paper ; end the paper where the subject ends. Successful papers, almost without exception, are those written with one definite and predominating thought, on which every fact is brought to bear and toward which every argument is directed. Conclusions alone are, as a rule, sufficient, with pertinent facts so marshalled as to give them proper support. The various minute details of the stages by which these conclusions are reached are usually uninteresting, and had better be touched lightly or omitted entirely. An expert editor, by remorselessly stripping away the padding, is usually able to make an abstract that will present all the author's ideas and conclusions in one-fourth the space of the original paper. Many a man who has had something of real value to say has first smothered the life out of it with padding, and then dug a grave and buried it in the midst of a five column paper compiled from some text-book. It would be far better for professional literature if every man would content himself with writing what he really knows, instead of writing what he has only read. One new fact discovered, one new, live, practical idea, is a sufficient subject for one paper, though it may be a short one. Two or three subjects for a single paper will render it weak or actually inert. A shot gun is adapted to small game, but large game is only brought down with a rifle. A single paper on a live subject, if it hits the mark squarely, will do more to establish a man's reputation than ten diluted and watery compilations.—*Atlanta Medical and Surgical Journal*.

Dominion Dental Journal

VOL. IX.

TORONTO, JUNE, 1897.

NO. 6.

Original Communications

THE DENTAL SHOW CASE.

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By L.D.S.
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When the profession was first organized in Ontario, show cases were not uncommon. They were not under the ban of any code of ethics, or any professional *esprit de corps*. But shortly afterwards they disappeared, until to-day we are able to boast that there is not one publicly exhibited at the door of a dentist in the Province. It is otherwise in Quebec. There are to-day fully four times as many as there were in 1868, and the quackery and quack-imitation is far beyond anything in its previous history. Several of the respectable members who formerly used them abandoned them, and now denounce them. Yet there are some who are by no means quacks who continue to use them, and it is well to know the reason. It must be remembered that the Province of Quebec is distinguished above all the other Provinces, and above every State in the American union, and even Mexico, for its illiteracy, and for the proportion of the people who cannot read and write. It was in Quebec that a book on agricultural chemistry was condemned for the French schools, not because it was insufficiently technical or accurate on the subject, but because it contained nothing about the Virgin Mary; and when the Grey Nuns of Montreal, and other

religious sisterhoods have for nearly twenty years been illegally practising dentistry in all its branches—for their own communities it is true, but nevertheless in absolute defiance of the law—we may understand the peculiarities of the professional position. What is the excuse made by a few otherwise respectable men who use the show case at their doors? The same that is offered by the otherwise respectable physician who uses the golden pestle and mortar over his door, viz., that a proportion of the people cannot read the ordinary sign or door plate; that as the boots in the window point out the shoemaker, the hats the hatter, so the golden tooth and the show case, and the pestle and mortar, respectively, indicate the dentist and the physician. Why does the quack use them? Simply as a catch-penny, and just because there is nothing too low to which he would not resort to trap the ignorant. Several have from twelve to fifteen signs of all sorts, paper, linen, wood, tin and brass, in every available space, and in addition, golden teeth hanging over the door, and show cases on each side. One party used to attract public attention by the eccentricities of a monkey whose gymnastics about his windows he daily superintended, until the Society for the Protection of Children interfered upon public complaint that he was trifling with the life of his little brother.

Notwithstanding the existence of two languages, and difficulties with which no other Province has had to contend, old Quebec has made solid reforms in legislation and education. The pioneers of dental reforms had obstacles entirely unknown in any other Province. The impecuniosity and the prejudice of some of its legislators revealed matters which were a public disgrace to local legislation, while the sore-heads in the profession preferred chaos to any condition in which they could not have a finger. We must recognize the strain which this placed upon the early pioneers of legislation. With the reasons for later trouble I will not deal at present, but I think every respectable member of the profession in Quebec owes a duty to investigate and reform certain difficulties. To these I shall, with your permission, refer later.

I would plead with some of the members to remove the vulgar public exhibitions at their doors of their professional and *personal* disgrace before the British Medical Association meets in Montreal in August. What opinion must the members of this distinguished Association, which elected a Canadian as its President, carry away of the social *status* of Dentistry if these degrading cases are continued? Some members only need to have their attention drawn to consider this proposal. I am sorry to be obliged to believe that there are others whose souls are so sordid and whose self-respect is so feeble, that they will listen to nothing that may woo them from their low instincts.

THE DENTIST'S EYES.

By ———

We have only two eyes. Glass ones do not take their place. We could better, as dentists, get through our duties without our legs. They are the precious windows of the body. They are the very source and centre of our daily existence. Without them we are as dead to the dental practice as if we were in our coffins. Yet the reckless way which they are being abused in our time is suggestive of the intensity of the struggle for existence. In sunlight, in shade, under gas-light, lamp-light, electric-light, etc., all day, far into the night, even on the one day of rest, many dentists now demand their functional strain, until the penalties come—headaches, eye-ache, their failure of sight: in some cases total blindness. It is a pretty severe price to pay for competition, and for the sake of the dollar. The dollar made that way is far from "almighty." Young men are now wearing glasses. Most of them are justified in their use. But why do they need them?

TAKING IMPRESSIONS WITH PLASTER PARIS.

By E. A. RANDALL, D.D.S., Truro, N.S.

Judging by the tales of woe related by some of our patients how they were nearly choked to death by the soft plaster running down their throat, there are some dentists who do not know how to take an impression properly. We are all supposed to know how to build a ridge of wax across the posterior edge of impression tray, and fit it to the mouth before taking impression, but even then we may sometimes make a mistake. In taking impression have a mouth mirror just within reach, and if you do get excess of plaster down on soft palate, reach down with mouth mirror, and one quick upward scrape, and your patient will be feeling comfortable.

Correspondence.

A BUSINESS EDUCATION.

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—I was much interested in Dr. Gardner's article on a business education for dentists, and though I am perhaps personally interested as a Yankee dental drummer, I hope I may be permitted to give a bit of advice to our good friends in Canada, not meaning, however, to imply that it is not applicable as well to our friends in the United States. My experience, extending now over twenty years of the Canadian trade, has convinced me that so far as practical and scientific training and life are concerned, Canadian dentists, as a rule, hold their own end up with quite equal credit with our American dentists. I have seen all classes of operative and prosthetic work performed in Canada equal in every particular to that made in the States ; but I have been amazed at the lowness of the fees for such work in comparison, and at the extension of credit given to the patients. I remember when the Canadian dentists got double the average fees, when the cost of living and practice was almost one-half what it is to day. The progressive dentist who keeps up with the times, has now to spend three and four times more money for dental goods than he had reason to lay out twenty years ago. The manufacturers not only have increased their temptations, but we have added much to facilitate work, and even the old school have got to school again, unlearn much they thought unfallible, and fall into line with the march of manufacturing—or fall out. This has probably compelled many who have feeble business ideas to go more into debt, and while the manufacturers are, I think, a pretty obliging lot, and do not, like one of your Canadian firms, add six per cent. interest to all accounts three months old, they expect to get their money. With one or two exceptions—one a notorious trickster who makes a business of swindling when he occasionally makes a business of dentistry—I have found the Canadian dentists scrupulously honest. But many of them are awful bad financiers. In fact, many of them do not seem to know the first principles of successful business management. They not only do not attend properly to their books and accounts, but they overlook the fact that by this neglect they injure their credit, and expose themselves to vexation and worry that might easily be avoided. I need not amplify to show the evils that accrue from this neglect or ignorance, but my

experience shows that it is your bad business men who are most easily tempted to fall into quackery. They resort to quackery because they fail to master business principles. If they do not thus degenerate, they simply punish themselves and their families, and in the struggle to make ends meet, they live in a mild sort of Gehenna. I have known good business dentists save more money out of a two-thousand a year practice than neglectful business dentists save out of a seven thousand practice. Therefore, I cordially approve of the proposition to make some previous business education an obligatory part of your entrance examination. Why not add a business man to your matriculant examiners? I mean all this in fraternal good will.

Yours, etc.,

A DRUMMER.

HOW TO CHECK THE QUACK ADVERTISERS.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—I do not agree with the gentlemen who think that the advice and criticism of the DOMINION DENTAL JOURNAL does no good to the quacks. If men do not know that other men despise them for their unprofessional conduct, are they as likely to reform? It is only by constantly repeating advice and warnings, that advice can be made to stick. Many of us do not need it, because we prefer to be respected by our confreres and by the public. Above all respect, I desire that of my colleagues. Those who are impervious to this sentiment, perhaps have never had a word of advice from a *confrere*, excepting that which they get through the monthly medium of the JOURNAL.

The too-prevalent disregard of ethics in Ontario may be explained as the outcome of the example set by the few "scallywags" in Toronto. They do the mischief to dental practice which the departmental stores do to business. The latter have been well shown up by the *Star* and *Saturday Night*. How shall we reach the public? Why not have a department of "Popular Dentistry" in the JOURNAL, supplying each month such popular information as we need to arouse the public to the frauds practised by the quacks and their imitators? This might be struck off in reprints each month, and officially sent to the press of the Province, with request for reproduction.

Another point. We object to the quacks advertising, but as long as they do all the advertising, and ethical men do none, just so long will the former get the inside track of the latter. Now if the ethical men would combine to insert permanently ethical cards in

the press, they would be of more money value to the publishers than the spasmodic sensationalism of the quacks. It would then pay the publishers to be on the best terms with the best paying customers. In Toronto, for instance, there would be nothing unethical if the papers contained every day a half or a whole column of the cards of the members of the Toronto Dental Society, from which, as from the Society, unethical members would be excluded. If the press cannot be persuaded to become friendly in any other way, it is perhaps a question if we can blame the publishers. They only thrive out of their advertisements, not by their circulation.

Yours,

LICENTiate.

Translations.

FROM GERMAN DENTAL JOURNALS.

Edited by CARL E. KLOTZ, L.D.S., St. Catharines.

PULPIN AND ANTISEPTIN. (By — Helles, Dentist, Berlin).—Conservative dentists have been enriched during the last year by a great many preparations, a large proportion of which are for the treatment of pulps of teeth or the antiseptic filling of roots with devitalized or decomposed pulps. All these remedies have been tried and tested with more or less good results, but some have been utter failures. The treating and capping of an irritated pulp has caused the greatest difficulties, and requires a great deal of time to prove a successful operation. Generally after treatment a temporary filling was inserted, which was left for months, to ascertain whether the operation was successful, before inserting a permanent filling. But it is very much easier to preserve a tooth with a devitalized pulp, and it must be admitted that a great many pulps fall victims to the devitalizing agent, because treating and capping a pulp is more uncertain of success than the filling of properly prepared root canals. It is unnecessary to state that a tooth with a living pulp has prospects of a longer service than one in which the pulp is dead and the canals filled. To preserve a pulp alive, one either exposed by accident in excavating a cavity or by caries is the ideal which is constantly before us, and which has been accomplished by very few, even with our best remedies at hand. It has not been possible to state with certainty that a tooth thus treated would always prove satisfactory. A great advancement has been made by colleague Schallenmüller with his two preparations,

pulpin and *antiseptin*, by means of which, so far as the present experience has shown, he has achieved, in almost every case, a rapid and thorough cure, and thereby the saving of the pulp. The effect of these preparations has its limit as well as others. With them it would be impossible to restore to life a badly decomposed pulp; but one that has been exposed for a short time, and with but slight suppuration, may be restored to its normal vitality with this remedy without much difficulty. I have used *pulpin* and *antiseptin* for some time, and am perfectly satisfied with them on account of the quick effects and favorable results, and hope they will soon be within reach of all dentists, and, as far as my experience goes, I am confident that whoever has used them would not wish to do without them. Before going further, I might remark that *pulpin* is used for treatment and *antiseptin* for capping. In describing my method of treatment I will divide it into two classes. The first and principal one is the cure and preservation of a pulp, the second is the treatment of teeth with dead pulps. An *accidentally exposed* pulp is treated with *pulpin* on a pellet of cotton and capped with *antiseptin*, which is made into a paste of the consistency of cream with oil of cinnamon. This paste is put on a piece of softened gutta-percha of the thickness of card-paper, and placed over the exposed pulp, care being exercised to exert no pressure. I do not use the gutta-percha, as there is too much danger of its exerting pressure, even with care; but, instead, place the paste direct onto the pulp and cover it with artificial dentine, or I mix a quantity of *antiseptin* with the artificial dentine and cap, and when this has hardened insert the filling. *The irritated pulp*, one that has caused pain, requires a careful cleansing of the cavity with spoon excavators. Should it be too painful to excavate, place into the cavity a little *pulpin* and cocaine (powdered). A few minutes will sometimes suffice, and the excavating may be proceeded with, but if still sensitive leave the remedy in the cavity till the following day, having temporarily filled the cavity. This treatment must be repeated till the pain has subsided, after which proceed with the capping. It is not necessary to expose a pulp for this treatment. *A suppurating pulp* that has not lost too much of its substance requires repeated treatment with *pulpin* to which a little thioform has been added, in other respects the treatment is the same as the others. Sometimes after capping a slight twinge of pain is experienced, which, however, is of no consequence, and passes off shortly, never lasting longer than the following day. Should the pain be severe, remove the capping and treat again with *pulpin*. Sensitive dentine and exposed periosteum can be successfully treated with *pulpin* and cocaine. *For root canal filling* *antiseptin* is a valuable article. After the canal of a newly devitalized pulp is opened and the nerve fibres removed, the canal is enlarged, if

necessary, and disinfected ; it is immaterial how this is done, so long as it is done thoroughly. I use a 20 per cent. sublimate solution, and have good results with it. It is now filled with antiseptin made into a stiff paste with concentrated carbolic acid, care being taken to fill thoroughly to the apex, then fill the cavity with any desired filling material. *Badly decomposed pulps* of long standing are treated in a similar manner to the above. Care must be taken in removing the *debris* not to force any of the septic matter through the apex. It is well to use antiseptics before attempting to remove all *debris*. Strong disinfectants should be used in these canals, but in other respects the treatment, etc., is the same as the foregoing. Fistulous openings of the gums heal of their own accord. In many cases it is not possible to remove all the nerve fibres from the canal ; these small portions at the apex of the root may safely remain, as they will create no disturbance, provided all parts have been thoroughly disinfected. Of course, the medicinal properties of antiseptin have their limits, and it will be impossible with it to effect a cure of periostitis with all its possible complications. Nevertheless both preparations may be considered acquisitions, and doubtless will find adherents. A trial will prove the truth of the assertion.—*G. Poulson's Berichtüber Zahnheilkunde, etc.*

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

THE SIGNIFICANCE OF PALATAL DEFORMITIES IN IDIOTS —“ Because departures from the normal are found physically, mentally and morally in defective classes, therefore scientific investigators have assumed that any one of these departures, occurring in the average individual, gives rise to the suspicion that the process of deterioration is already under way in him.” With this admirable thesis, W. Channing (*Journal of Mental Science*, Jan., 1897, p. 72), the author, seeks for some sound deductions on the subject of the stigmata of palatal deformities among the insane. At the outset he takes issue with those who would seek to lay so much stress upon the peculiar shape of the palate as one of the most characteristic and significant of the stigmata of degeneration. The methods of inspection are commented upon and the necessity for accurate measurement and cast-taking insisted upon, if trustworthy results are to be gained. Talbot's classification is followed and the author investigated some one thousand feeble-minded patients, taking casts of all. He had, moreover, 500 casts from average American school children. His

summary of results is as follows: 1. Two-fifths of the palates of idiots are of fairly good shape. 2. Palates of normal individuals may be deformed. 3. In the idiot it is a difference in degree and not in kind. 4. In either case it shows irregular development anatomically. 5. Palates of average children and idiots under eight years of age do not in the majority of cases markedly differ. 6. There is no form of palate peculiar to idiocy. 7. The statement that a V-shaped or other variety of palate is a "stigma of degeneracy" remains to be proved.—*Amer. Med. Surg. Bulletin*, May 10th, 1897.

TRANSILLUMINATION IN THE DIAGNOSIS OF EMPYEMA OF THE ANTRUM OF HIGHMORE.—In March, 1896, I saw a patient, a young woman, in whom I found good reason for suspecting the presence of pus in the right maxillary antrum. I therefore made an exploratory puncture with a Lichwitz's trocar through the outer wall of the inferior meatus, and established the diagnosis by washing out the antral cavity with weak carbolic lotion syringed through the trocar, and finding that the fluid as it escaped through the ostium and anterior nares was rendered turbid by a quantity of foul-smelling curdy-looking pus. I had previously ascertained that the nasal fossa was free from discharge. This procedure was undertaken for the purpose of diagnosis only, and it was intended to follow it up by making a permanent opening in the alveolus, but to suit the convenience of the patient this was postponed; and when I saw her again shortly afterwards the one syringing had apparently practically effected a cure, as she stated she had lost her symptoms and had had no discharge. On examining the nose there was no sign of pus, therefore it was decided to defer making the alveolar opening for the time being. Since then I have seen her at frequent intervals, but have never succeeded in discovering any pus in the nares, though she has suffered from slight postnasal catarrh, which made her think that her old discharge was flowing backwards into the throat. The other day she was examined by means of the transilluminator, with the result that a "very decided absence of the suborbital crescent" was observed. I again punctured the antrum as before, and expelled by syringing a very little white curdy-looking matter—certainly not more than half a drachm—quite insufficient I should say to account for the opacity, which I think must have been due to greater thickness of the anterior antral wall on the right side. The idea which suggests itself to me is, Why trouble with the transilluminator in cases of suspected empyema of the maxillary antrum when we have at hand such a simple and certain method of clinching the diagnosis as puncturing? It is practically painless (with the aid of cocaine) and free from danger. I have adopted it in a considerable number of cases

and have not seen the slightest ill consequence. I make it a rule to employ it in all cases of persistent purulent discharge from the nose, with the view of proving or excluding the presence of pus in the maxillary antrum, and have been astonished at the number of cases in which I have met with a positive result.—*E. Furniss Potter, M.D.Brux., M.R.C.S., L.R.C.P.Lond., in British Medical Journal, March 13th, 1897.*

THE PHYSIOLOGICAL ACTION OF EUCAINE. — Charteris (reprint from *Proceedings of Royal Society of Edinburgh*, Sess. 1895-96), assisted by MacLennan, has made a series of experiments on the physiological action of solutions of the hydrochlorate of eucaine and solutions of hydrochlorate of cocaine. Solutions of these salts were injected hypodermically into guinea-pigs of the same weight, and the results were compared. At first the quantity used was small, but it was gradually increased until the lethal dose of each was accurately ascertained. After repeated experiments they came to the conclusion that the lethal dose of eucaine per kilog. body weight is 0.09 g., and the lethal dose of cocaine per kilog. body weight 0.068 g. They also found that the mode of death by the two substances varied. With the cocaine salt they observed more rotatory movements of the head, more opisthotonos, more salivation, and more labored breathing, than with the eucaine salt. It was also noticed that the physiological action produced by a given dose of the eucaine salt, under identical conditions with regard to the weight of the animal experimented on. Hence the action of eucaine is slower in onset and less in intensity. As regards local anæsthetic effect, three drops of a solution of hydrochlorate of eucaine (1 in 10), when injected into the eye of a guinea-pig, induced in sixty seconds complete anæsthesia of the cornea. The pupil was not affected, and there was no subsequent irritation. When used in operations on the eye, the evidence is clear that it has no effect on the pupil. Berger, of Paris, in operating for cataract, employs first a drop of a 1 per cent. solution, and after three minutes a drop of a 2 per cent. solution. This procedure, he says, causes complete anæsthesia of the cornea. In dental practice it is found that five drops of a solution (1 in 10) injected into the gum before extraction of a tooth are sufficient to render this operation painless. — *British Medical Journal, March 27th.*

A CLINICAL LECTURE ON A CASE OF HYPERTROPHY OF THE GUMS (Delivered at University College Hospital by Christopher Heath, F.R.C.S., Holme Professor of Clinical Surgery).—I have had recently in my wards a remarkable and somewhat uncommon case of hypertrophy of the gums, on which I propose to make a

few remarks. The patient was a young man of twenty-six. The hypertrophy of the upper lip and the fulness of the cheeks were the most prominent features when the mouth was closed, but upon opening it a remarkable condition of the gums was at once visible, and the open mouth reminded one of the mouth of a hippopotamus or rhinoceros on a small scale. The history was that the enlargement of the gums was first noticed four years ago, when the patient went to the Middlesex Hospital and was admitted under the late Mr. Hulke. I am enabled by the kindness of Mr. Storer Bennett to show you two casts which he took at that time, and which show comparatively slight hypertrophy of the gums and no displacement of the teeth. Mr. Hulke cut away the hypertrophied gums of both jaws, and the patient left the hospital relieved. Three months afterward she noticed that the growth had recommenced, and though it has steadily made progress for the last three years, he has had no further advice for it. On admission here the external deformity was well marked, and on opening the mouth the gums of both jaws were seen to be enormously hypertrophied, and most of the teeth to be loosened and displaced. The palate looked at first like a cleft palate, but this was due to the hypertrophied gum on each side covering the palate nearly to the median line, where a small interval was left. This condition I have met with before, and I show you a cast of the mouth of a young lady who consulted me ten years ago, in whom a similar condition existed. As the parts are evidently very vascular, and as I knew by previous experience of similar cases that the bleeding would be free, I took the precaution of having the patient in the recumbent position, with his head dependent over the operating table. I then rapidly extracted all the loose teeth of the upper jaw, leaving only the two canines, which were firm, and cut away with scissors the hypertrophied gum down to the alveolus, the edge of which I removed with bone forceps. The bleeding was free, and especially from the folds which enveloped the palate, but was stopped partly by the use of Paquelin's cautery, and partly by plugging the sockets of the teeth. The patient made a good recovery, and a fortnight later I performed a similar operation on the lower jaw, removing all the loose teeth except the canines and bicuspid, and clearing away freely the hypertrophied gums. The patient's condition now, two months after the operation, is very satisfactory, the gums being in a healthy condition, and there being nothing abnormal beyond a little looseness of the mucous membrane of the lips. A microscopical examination of the parts removed, by Mr. Drew, showed that the mucous membrane covering the growth was healthy, the bulk of it being composed of delicate bundles of wavy fibrous tissue, which interlaced. Between the bundles were numerous cells, in some places

forming large clusters. Numerous vessels were scattered through the growth. Hypertrophy of the gums is a by no means common affection. The first case recorded was, I believe, by Salter, the case occurring at St. George's Hospital in 1859, under Mr. Pollock, in a girl aged eight. Salter speaks of it as a congenital affection, but this, I think, is a mistake, for the affection, though occurring in children, has never, so far as I know, been noticed at birth. Just thirty years ago I saw a case in this hospital under Mr. Erichsen, in a child of two and a half years, in whom the affection had shown itself at the age of seven months, when the teeth began to appear. Mr. Erichsen removed the exuberant growth freely, and cauterized the cut surfaces, but a permanent cure was not brought about, for, when seven years of age, the child was brought before the Royal Medical and Chirurgical Society by the late Dr. John Murray, to illustrate a paper on Three Peculiar Cases of Molluscum Fibrosum in Children of One Family. Mr. Erichsen's patient was the eldest of the three, and her portrait (which was shown) bears out the description given of the hypertrophied condition of the gums. The other children, aged four and two, had similar conditions of the gums. Ten years later I had a similar case in this hospital in a girl of four and a half years, who was one of five otherwise healthy children. The swelling of the gums had been noticed for two years, and when she was admitted the gums were enormously hypertrophied, as is shown in the casts taken at the time. Under chloroform I removed each hypertrophied gum and alveolar border in one piece, which I have had preserved in the museum, and she made a good recovery. About the same time I had a case in private in the person of a young man aged twenty-six, in whom the hypertrophy affected only one side of the lower jaw, extending from the right wisdom to the left canine tooth. The affection had been noticed from early childhood, and gave no pain. Here I removed the affected alveolus with bone forceps, and a complete recovery ensued, which I know to be permanent, as I happen to have heard from the patient quite recently. It is remarkable that in most of the cases of children affected by hypertrophy of the gums some want of mental development was noticed, but certainly in the two young men upon whom I have operated no such deficiency was to be observed. A remarkable instance of the disease, also occurring in an adult, was recorded by Mr. MacGillivray, Surgeon to the Bendigo Hospital in Australia. The patient, a woman aged twenty-nine, seemed to have suffered from the affection in both jaws soon after birth. At the age of ten portions of the gum were cut away, and several teeth extracted, and she had herself in later life cut away portions of the projecting gum with a razor. All these operations gave rise to severe hæmorrhage. The enormous growth seemed to

have originated mainly from the palate portion of the gums, the labial surface being comparatively sound. Mr. MacGillivray removed the hypertrophied gums and alveoli with perfect success. A condition of outgrowth from the gum, due to the irritation of tartar or of artificial teeth, somewhat resembling hypertrophy of the gums but much less vascular, is known as polypus of the gums; and it happens that I had a remarkable instance of this last week. You will remember an old blind woman who was sent to me with a large fleshy mass projecting from the upper alveolus, which I removed at once by tearing it from its attachment with the finger, the resulting hæmorrhage being slight. We found that it had sprung from the upper alveolus, in which the teeth were broken and encrusted with tartar, and it is evident that this fleshy mass was nothing more than a local hypertrophy of the gum, the result of irritation. This must not be confounded with the true fibrous epulis which springs from the periosteum of the alveolus, nor again with the vascular myeloid growth which springs from the interior of the alveolus, and forms a maroon-colored tumor—badly called a myeloid epulis—of which we have recently had an example in a young girl aged seventeen.—*British Medical Journal*.

Selections.

FACIAL RESTORATION.

The invention and construction of artificial substitutes for parts of the human organism which have been lost or injured by accident, or otherwise, have of late years engrossed the attention of many. In the race for honors of this kind the dentist has not been left behind. From time to time cases of deformity and disfigurement are brought under his notice, and his special knowledge of mechanical processes enables him to exhibit his skill, and affords a wider range to his ingenuity than is required for the mere replacement or reparation of the teeth.

It may be interesting to linger for a few moments upon some previous attempts to remedy facial defects, and to restore to the ruined features a semblance of their original form. In 1804 Dubois de Chemant* (the inventor of mineral teeth) relates that with his mineral paste he replaced "the under lip, the chin, and several teeth" for "the daughter of an English physician, which had been lost by the violence of the small-pox"; and, in 1828, James Snell,†

* De Chemant.—"A Dissertation on Artificial Teeth" (London, 1804), page 37.

† Snell.—"On Obturateurs or Artificial Palates, and Deficiency of the Lower Jaw, Lips, and Nose" (London, 1828).

a surgeon-dentist of London, published a book on "Artificial Palates, and Deficiency of the Lower Jaw, Lips and Nose," wherein he records several successful cases. It would appear that, prior to this, little attention had been paid to the matter beyond the invention of obturators, since Snell claims for his book the distinction of being the first work written exclusively on the subject. De Chemant's idea is original in its conception and practice; but as neither of these writers left anything but bare records of their cases behind them, the art of photography being then but a recent discovery, and scarcely in the initial stage of its development, we are unable to form any judgment as to the extent of their success. During the last fifty years the gradual progress of knowledge on all subjects intimately connected with our existence or welfare, bringing increased methods of manipulation, has led to a keen competition in inventive skill, and it is said that the artificial nose maker has established for himself a separate department in trade. So long as defects are confined to external parts of the face, the artificial nose maker may be able to supply the deficiency, but when the injury involves the loss of portions of the palate, jaw, or other parts of the dental apparatus, he finds himself outside his province unless he has a sound practical knowledge of dental mechanics, by which means only the requirements of such cases can be met.

In the March number of the *Quarterly Circular*, 1889, we illustrated a case of facial disfigurement restored by means of an obturator and artificial cheek and eye, by Mr. Hayman, of Bristol; and in the June number of the same year Mr. Andre, of London, supplied us with the description of a case which he had restored by means of an artificial nose and partial denture. Both these cases were successful.

But what is probably one of the most unique cases of facial restoration has just been effected by Mr. S. Brock, of London, in conjunction with Mr. Hudson, an artist friend of his. The history of the case is as follows:

In April, 1893, two young miners, William and John Veale, natives of St. Ives, in Cornwall, owing to the gradual decline of the mining industry in that county, left England for Bolivia in South America. They at once found work in the mine of the Komer Kocha Silver Company. In November, 1894, the younger brother, John, died; and, shortly after, the Komer Kocha Company failed, whereupon the surviving brother entered the service of the Royal Silver Mine, Potosi. His account of the accident which there occurred to him is as follows:

"About midnight on March 31st, 1895, being in charge of the boring machine, I bored five holes and charged them with dynamite. I directed the native with me to fire two of the fuses whilst

I lit the other three. We then retired to a place of safety. The report followed in due course, and after waiting the regulation half-hour I went back alone to see the result. Just as I got within twelve feet of the holes there was a terrific explosion, and I remember nothing more.

"When picked up some time after, I was found to be terribly injured. A piece of rock had swept across my face, carrying away both my eyes, nose, upper lip, part of both cheeks, and upper jaw. I lay apparently lifeless for two days, and the local doctors, think-

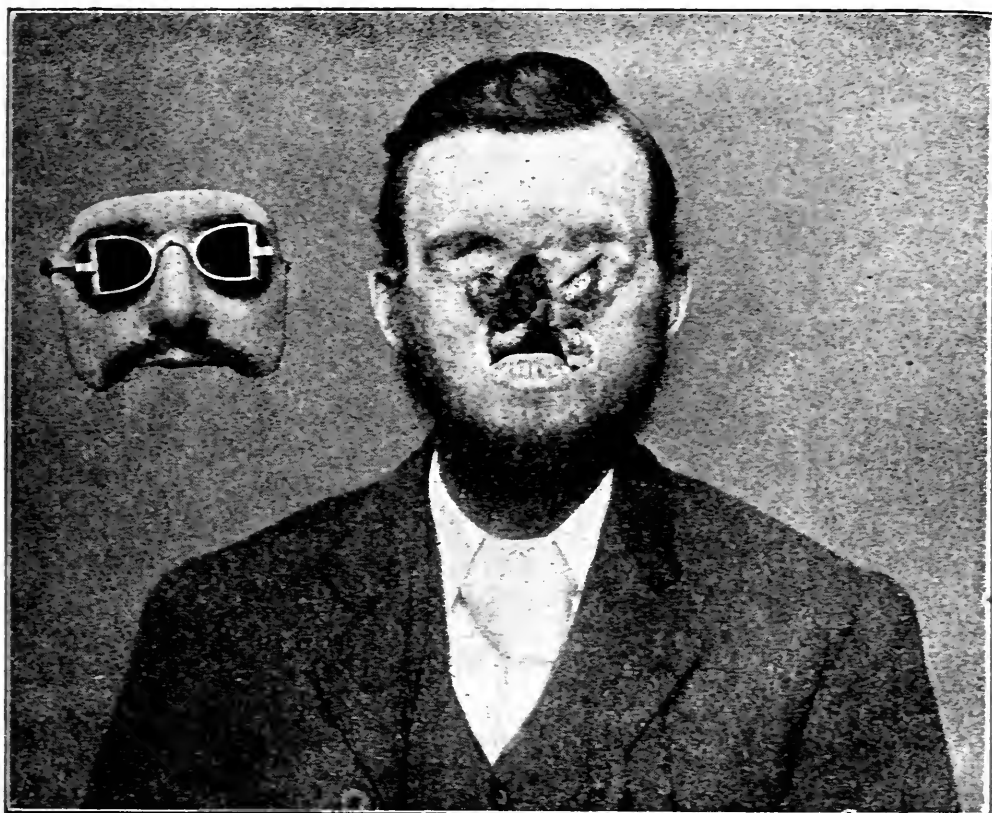


Fig. 1 shows condition of the face before treatment, and the mask away from the face.

ing recovery impossible, ordered my coffin. However, as signs of life became more evident, some attempt was made to dress my wounds, and after twenty-one days' unconsciousness I gradually awoke to find myself in so pitiable a plight that I could not then be thankful for life, but could only regret that I had not been allowed to die." (See Fig. 1.)

To intensify the disaster, the Potosi Bank, in which Veale's savings were deposited (some £75), failed two months later. The unfortunate man left Potosi in August, 1895, arriving in England in

October. Shortly after this he came under the notice of Mr. S. Brock, to whom we are indebted for the following details:

"I first saw Veale in November last. A medical man in Penzance recommended him to visit London, to see Dr. Critchett, of St. Mary's Hospital, in order to ascertain if anything could be done for his sight, as Veale thought he could distinguish strong light from darkness; it is probable that some small portion of the retina may have been left behind which caused the sensation. He was detained at the hospital some four or five days, and then sent away hopeless. When he came under my notice, I considered the possibility of replacing the palate and teeth, and, with the aid of Mr.



Fig. 2 shows the artificial upper denture.

Hudson, the cheeks, nose and lip. I must confess, however, that on surveying the void in his face, I was conscious of the extent of the undertaking, and of the difficulties which might arise. Both eyes, the floor of the orbits, and the nose had disappeared; the anterior part of the superior maxillary from the second bicuspid on the left side to where the first molar should have been on the right was also missing, and likewise all the teeth with the exception of the second bicuspid and first and second molars on the left side. The second molar was, however, so extensively decayed that I decided to extract it. There was thought to be some danger in doing this owing to the shattered condition of the jaw, but, with the assistance of Mr. Braine, gas was administered, and the tooth

successfully extracted ; since then, by the way, the third molar has partially erupted.

" Dr. Bland Sutton, who saw the patient at this juncture, strongly advised a further delay of six months to allow the parts to more thoroughly heal. Veale accordingly went back to St. Ives and returned in the beginning of May.

" I then took an impression of the remaining parts of the mouth in beeswax, and cast a model in plaster, from which a special tray was made. With this a fresh impression and model were taken and cast, moulded in sand in the ordinary way, and a gold plate



Fig. 3 shows the mask.

was 'struck up' to the shape. On the posterior margin of the plate I soldered a crescent-shaped piece of plate about half an inch wide, the anterior and free edge being raised to come in line with the lingual surface of the palate. This, beside securing strength, allowed of the surface of the vulcanite being brought flush to the edge of the gold, instead of having a chamfered edge, which invariably curls away from the plate.

" Before mounting the teeth I also soldered a gold-pointed tube on the anterior part of the plate to project as near as I could judge towards the centre of the nose, the object of this being to connect the denture to the mask. The teeth were then mounted and the

plate tried in for the bite, at which stage I had the satisfaction of hearing the patient speak distinctly.

"After flasking and clearing away the wax, a thin layer of rubber was packed over the surface of the gold; the outer portion with the teeth was also packed with just sufficient rubber to hold them together and to gain enough strength. The remaining part was then filled with plaster, and a tin plate, previously struck up to the shape of the palate, was placed in and the flask closed. When the plaster had set, the flask was opened, the tin plate and superfluous

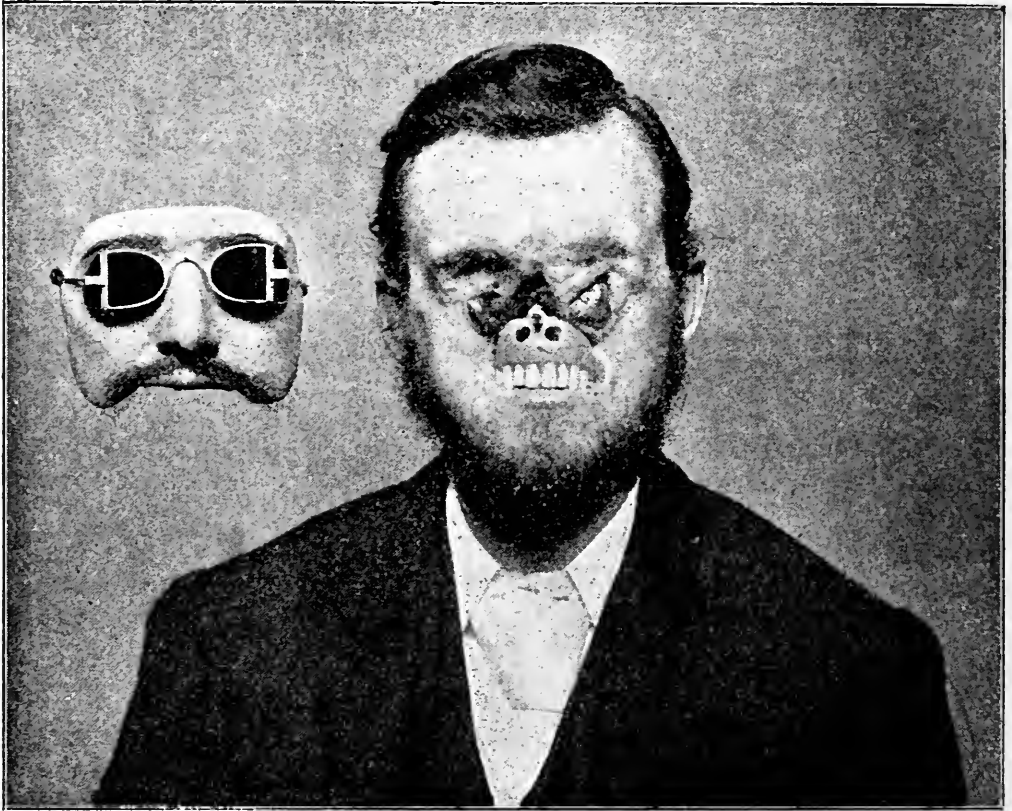


Fig. 4 shows the face with artificial upper denture in position, and the mask away from the face.

portions of plaster were removed, a fresh layer of rubber was placed in position, and the flask was again closed and put in the vulcanizer. After vulcanization the plaster was cleared away through two holes in the front, one on each side of the gold pin. By this arrangement the utmost lightness was obtained. (See Fig 2.)

"Mr. Hudson and myself then attempted to take a plaster cast of the disfigured face with the denture in position. We first tried oiled silk to prevent the plaster adhering to the face, etc., but this proved too unyielding, and, the mould being very imperfect, we

next tried a layer of moistened tissue paper, which answered admirably. From the mould thus obtained a plaster model was cast, upon which Mr. Hudson skilfully modelled up the missing portions of the face in wax. From this a plaster mould and model were taken and cast, and a zinc die made with a lead reverse. The mask is made of silver, and the three main portions (namely, the two side pieces and the centre strip) are soldered together.



Fig. 5 shows the patient's present appearance.

"This completed the rough portion of the work. Mr. Hudson then, with much labor and artistic taste, carved the zinc model wherever undercuts were desirable, notably the inner and outer parts of the nostrils, the mask being chased into them. Two small silver tubes were then shaped and soldered into the nostrils, and all the joins carefully finished. A silver tube was made to slide over the gold pin fixed to the denture, and this was then soldered to the inner surface of the mask in the centre of the nose,

and strengthened in position by a piece of silver plate with a hole in the centre, soldered on transversely at the back of the nose.

"The upper lip is merely a piece of red rubber tubing tied at each end, and held in position by three catches soldered inside the silver lip; the rubber coming just below the edge of the silver lip allows the patient's lower lip to rest comfortably against a flexible surface. This is easily removed for cleansing purposes—in fact, several were



Fig. 6 shows the patient's present appearance in profile.

made for the patient as a store. A strong pair of blue silver-framed goggles with the ordinary retractor fastenings behind the head were constructed, and a small pin was soldered to the back of the centre of the bridge of the goggles; this pin fits into a hole made in the mask, thereby preventing the goggles from slipping. After this Mr. Hudson painted the mask whilst it was on the patient's face. A slight moustache and eyebrows were affixed, the patient's own whiskers being laid under contribution for the hair required for them." (See Figs. 3 and 4.)

"Too much stress," continues Mr. Brock, "cannot be laid upon the work of the artist in this case. The exterior of the mask is so skilfully modelled, and the combination of color, with its many tones of shade, imitates so admirably the natural complexion of the wearer, that a close observation of the face would be necessary to detect its artificiality."

We have had the opportunity of examining the zinc model cast from Mr. Hudson's model of the restored face, and have no hesitation in saying that it exhibits the artistic power of a master hand.

Of the denture and mask the patient speaks as follows :

"Not the least part of my trouble since recovery has been the necessity for wearing a heavy veil. I am thankful to say this is no longer needed, for by the kindness of two gentlemen who became interested in me (Mr. Brock, dentist, and Mr. Hudson, artist), an apparatus has been constructed which enables me to speak distinctly, to eat, drink, and smoke with comfort, and to appear in public without attracting attention. This is all very marvellous to me, and I need hardly say how deeply grateful I feel for their gratuitous services, and also for the kindly help of their many friends, whose generosity enabled me to live in London whilst the work was being carried out." (See Figs. 5 and 6.)

A subscription has been started with the object of securing Mr. Veale a small annuity. Donations may be sent either to the Rev. James Pullein Thompson, Hon. Sec. of the National Blind Relief Society, 27, Tite Street, Chelsea, London, S.W. ; or, the Branch Manager of the City Bank, 6, Sloane Street, London, S.W. Cheques should be crossed "The Veale Fund Account."—*Ash's Quarterly Circular*.

[We are under obligations to Messrs. C. Ash and Sons for the use of the excellent cuts in the above article.—ED. D.D.J.]

NITROUS OXIDE GAS.

Hardly a week passes but we receive intelligence of fatalities from the use of chloroform. We have always unhesitatingly denounced its use in dental practice, and recommended the employment of nitrous oxide, or this gas supplemented by ether instead. It has lately been our lot to chronicle the death of a patient under the latter combination of anæsthetics, and to publish the opinion of the medical man, that death was due to "the paralyzing action of the gas upon the heart." If this opinion had been allowed to go forth unchallenged and uncontradicted, it might have raised grave fears in the minds of those who are daily accustomed to administer this safest of anæsthetics. Dr. Dudley

Buxton, however, in our last issue, has dealt with the report with the skill of an acknowledged expert, and has given a satisfactory denial to the statement made that gas paralyzes the heart.

The facts, briefly recapitulated, are as follows. A young, strong, healthy woman who has no morbid fear of an anæsthetic, or of the operation, namely the extraction of some decayed teeth, is given gas, followed by a drachm and a half of ether. The operator extracts three teeth, when suddenly the patient changes color, stops breathing, and in spite of stimulants and artificial respiration, never recovers consciousness. What caused death? The medical man who made the post-mortem examination, in reply to the coroner, affirms "I think the gas was probably the cause, it paralyzed the heart." Dr. Buxton agrees with the medical man that syncope caused death, but differs from him in his theory that the syncope was produced by the gas, if the gas was properly given. He seems to think that the anæsthetic was skilfully administered. Dr. Buxton has shown, and his statement has been confirmed by other anæsthetists, that nitrous oxide gas stimulates the action of the heart, if not pushed to the extent of depriving the tissues of oxygen to a dangerous extent. If this deprivation takes place for too long a period, syncope may result. From the evidence, two and a half to three minutes were expended in producing anæsthesia. "If this statement is to be taken literally, it must imply rebreathing of gas and ether, and a prolonged period of deprivation of oxygen." The usual time employed in producing anæsthesia with gas is about fifty seconds, and this is usually accompanied by cyanosis and jactitation, warning the administrator that the limit is reached. We have known cases in which gas has been administered for three minutes, but these were cases of advanced phthisis, where the breathing was very shallow. If the point approaching asphyxia is reached, whether by overdose of gas, interference with respiration, by the tongue being forced back, or some blood or foreign body in the larynx, the strain on the heart, as Dr. Buxton points out, is very severe. This strain may be aggravated by the upright position in the chair, and by weakness produced by fasting or any other cause. The patient, in this case, presumably had not taken food since the morning. Dr. Buxton, however, does not think that any deprivation of oxygen, either from the anæsthetic, or as the result of the operation, can be adduced from the evidence. He is inclined to think that death was caused through shock to the patient, whose vitality was at a low ebb in consequence of a prolonged fast.

What are the lessons to be learned from this distressing case? We are so accustomed to use nitrous oxide gas at all times in our everyday work, that the very idea of a fatality rarely, if ever, occurs to us in hospital or private practice. Yet this sad occur-

rence, "though neither nitrous oxide gas, or ether, are discredited by it," must bring home to our minds the fact that these operations are never wholly free from danger, and that we should be armed with the necessary drugs and instruments, as well as with the knowledge of how to use them to the best advantage, as also the methods of forced respiration and inversion spoken of by Dr. Buxton. While being careful not to administer the gas too soon after the patient has had a full meal, let us also be careful to enquire how long the subject has been fasting. We sometimes have patients wishing to take gas who from want of food and sleep have allowed their vital forces to sink to a very low ebb. In such cases it would be wiser to recommend the ingestion of some strengthening and quickly digestible food before the operation is proceeded with. We cannot think that we know every factor in this sad case. Such occurrences are, we are thankful to say, very rare, but we must let them serve to act as a warning to us when dealing with our fellow man, to take every precaution against such a disaster, and to omit nothing which may tend to avert such an end.—*Editorial, British Journal of Dental Science.*

CEMENT AND AMALGAM FILLINGS.

By H. BALDWIN, M.R.C.S., L.D.S.ENG.

On first making experiments out of the mouth with the mixture of oxyphosphate cement and amalgam I found that its conductivity to heat was very high, too high to allow of its being used in sensitive teeth with large cavities; this consideration, coupled with the likelihood of its becoming honeycombed on the surface, owing to the solution of the cement, led me practically never to use it.

I was struck, however, by the facility with which the two materials could be mixed together, and the readiness with which the oxyphosphate laid hold of the amalgam. From this the idea arose that it would be possible to line a cavity with the cement, and while the cement was still soft to fill the rest of the cavity with amalgam, thus combining the real advantages of both materials without the disadvantages of an intimate mixture of them.

I commenced filling large crown cavities in the mouth in this way, practically sticking the amalgam in with the cement. Being pleased with the results, very gradually I extended the range of cases in which I followed this method, till finally I arrived at the position of filling the greatest possible variety of cavities, which

previously I would have filled with amalgam alone, and, furthermore, of filling a large number of cavities, in this way, which previously I would have filled with gold. This position I still maintain.

The *modus operandi* is as follows: The cavity should be excavated with the usual care as regards removal of the decay, but the amount of undercutting which is necessary is very much less than for either amalgam or gold. The cavity should be thoroughly dried. The amalgam should first be mixed and of a convenient sort of consistency. The cement should then be mixed and of a decidedly thin consistency, not much thicker than would be used for fixing crowns. The cavity should then be filled with cement, preferably by means of the same spatula as has been used for mixing it. Then immediately a large piece of the amalgam should be pressed into the cement and, by means of a smooth rounded instrument, should be driven more or less firmly home, working from the centre to the circumference, and so expressing much of the cement on all sides. The edges of the cavity should then be quickly cleared of both cement and amalgam, by means of spoon or other excavators, till not a trace of anything is left at any of the edges, especially at the cervical edge, if the cavity is an interstitial one. This obviates the danger of getting the cement exposed on the surface when the work is finished. The remaining cavity should then be filled up with pure amalgam, carrying it down to the cervical edge in small pieces, with perhaps a trifle more mercury added so as to ensure its going down completely, and then finishing with harder amalgam and squeezing with bibulous paper in the well-known way. A matrix should be used in large composite cavities and may be applied either before commencing to fill or immediately after packing the first piece or pieces of amalgam and clearing the edges. Putting on the matrix after clearing the edges keeps the matrix clean and free from cement.

The cases for which this composite filling is suitable are practically all those cases which are generally considered suitable for amalgam alone, and a great many cases which are generally considered suitable for cement alone, and in addition a great many cases which would otherwise be suitable only for gold. All large interstitial cavities in molars and bicuspid and crown cavities which are fit to receive a hard filling at all may with propriety be filled by this method. There is little in common between a filling of this sort and an ordinary amalgam filling. Ordinary amalgam as a filling material is open to many objections which the combination is entirely free from, and the combination presents a number of merits which belong to it alone. Thus, to compare it, point by point, with gold or amalgam: (1) It requires a much smaller sacrifice of healthy tooth substance; (2) it leaves a

stronger tooth ; (3) it necessitates much less pain in excavating ; (4) valuable time is saved in excavating ; (5) it interposes a non-conducting layer between the sensitive dentine and the metal ; (6) it adheres to the cavity ; (7) it is more water-tight ; (8) compared with amalgam, at all events, it does not stain the tooth, nor show through the thin enamel of a nasty color ; and (9) it is quicker than gold, or even amalgam, *i.e.*, when amalgam is inserted with a due amount of care.

I venture to submit : (1) that all those cases of cement fillings in back teeth which one so often meets with as permanencies would be better treated by coating the cement with amalgam in this way ; (2) that most teeth which are filled with cement as a trial for a temporary purpose would be better filled as a permanency in this way. Where the cement will be tolerated this combination will equally be tolerated, and whereas it is exceedingly difficult oftentimes to pack simple cement tightly against the cervical portion of a deep interstitial cavity, it is perfectly easy, by means of the amalgam, to drive the cement well home. In passing, I would like to give it as my opinion that the supposed tendency of cement to undergo specially rapid solution at the cervical edge does not exist. The disappearance of the cement and appearance of a cavity in this situation is due to the cement never having been in absolute apposition with the tooth at the point, or to the decay there never having been thoroughly removed. The difficulty of packing plain cement at that point is not, I fancy, generally realized, and lies not only in the remoteness of the situation, but in the fact that a little moisture frequently bedews that part, and that the gum presents a prominent and possibly overhanging edge, which edge, when pressed upon, is specially liable to give forth a serous or sanious oozing ; (3) that nearly every amalgam filling would be improved by being inserted in this way. I have used this method with gradually increasing frequency since my early days of practice, thirteen years ago, and to-day I hardly ever put in an amalgam without the preliminary adhesive stratum of cement. Of course, care and neatness are necessary in this as in every dental operation, and it does not do to leave a layer of cement outcropping at the edges. In a certain proportion of difficult cases this outcropping may occur, but if the greatest care be used it will only be in a small proportion, and can easily be rectified later, when its results begin to show. I would point out, moreover, that amalgam affords such an efficient means of packing home the cement that, even should the cement become exposed, it proves unusually durable.

The accompanying are specimens of this kind of work in large complicated cavities. One tooth and filling has been sawn through. This one shows how small a stratum of cement is

necessary to prevent leakage, the cement evidently controlling the shrinkage or warpage of the amalgam. Presumably such alteration does go on in the amalgam, but being held close to the tooth by the cement goes on entirely at the surface. The other teeth were smashed through with cutting forceps.

The teeth were all soaked in water for some little time, and then dried in the usual way before filling, and immediately after were submitted to the ink-test for about forty-eight hours. One specimen shows the filling standing erect, attached by a rather narrow base, but held firmly to the tooth by the cement, although the tooth was broken open by means of cutting forceps.

This method is sticky and messy I admit, but increased efficiency is obtained, and practice soon enables one to overcome its difficulties and in a very large number of cases to produce a filling which is quicker, easier, less painful at its inception, less liable to subsequent fracture of its retaining walls than can be produced in any other way.—*The Transactions of the Odontological Society.*

CONGENITAL TEETH.—In reporting some cases of congenital teeth not long ago, Dr. J. W. Ballantyne took occasion to point out that the fact that infants are occasionally born with one or more teeth already cut was well known to the ancients. Indeed, as he showed in a paper on the Teratological Records of Chaldea, instances of the kind are mentioned in the very ancient cuneiform inscriptions found at Nineveh. As showing the meaning which was ascribed to the occurrence, Dr. Ballantyne quotes the following passage from Holland's translation of Pliny's "Natural History." "Certaine it is also that some children are borne into the world with teeth, as M. Curius, who thereupon was surnamed Dentatus, and Cn. Papyrius Carbo, both of them very great men and right honorable personages. In women the same was counted but an unluckie thing, and presaged some misfortune, especially in the daies of the K.K. regiment in Rome; for when Valeria was born toothed, the wizards and soothsayers being consulted thereabout, answered out of their learning by way of prophesie. That looke into what citie she was carried to nource, she should be the cause of the ruine and subversion thereof; whereupon had away shee was conveyed to Suessa Pometia a citie of that time most flourishing in wealth and riches; and it prooved most true in the end, for that citie was utterly destroyed." M. Schurig, in his "Embryologia Historico-Medica," published in 1732, collected a number of cases recorded by other writers up to that time. Tradition has it that several men famous in history were born with teeth. As instances, Dr. Ballantyne names Richard the Third, Louis the Fourteenth,

Richelieu, Mirabeau, and Mazarina. Shakespeare refers in several places to this belief regarding Richard. In "Richard the Third" the Duchess of York says :

Marry, they say my uncle grew so fast,
That he could gnaw a crust at two hours old ;

In the same play, Queen Margaret refers to Richard as :

That dog that had his teeth before his eyes.

Richard himself says :

For I have often heard my mother say
I came into the world with my legs forward ;

* * * * *

The midwife wonder'd and the women cried
"O Jesus bless us, he is born with teeth !"
And so I was ; which plainly signified
That I should snarl and bite and play the dog.

Congenital teeth are rare. Of 17,578 infants born in the Paris Maternity between 1858 and 1868, only three had teeth, that is, not much more than one in 6,000. Yet Dr. Ballantyne has collected seventy records of cases from literature, and doubtless, as he says, many have escaped notice. In respect of sex, the female shows a slight preponderance, which, if there be any truth in Richard's theory of the significance of congenital teeth, may perhaps be expected to increase with the evolution of the New Woman.—*British Medical Journal*, March 20th, 1897.

Reviews.

Undergraduate Journals. Some of the older school of practitioners have been dubious as to the advisability of encouraging dental periodicals specially published by the students of the colleges. It was thought that they would distract the undergraduates from their less ambitious routine of study, and tempt the prentice pen to write less sense than nonsense. However, the students might fairly retort that graduates and even teachers have sometimes written nonsense, and undergraduates have written wisely. We are rather in favor of giving the boys their opportunity to measure pens with their elders, and so far, the journals published by those of several of the colleges in the United States have been creditably conducted. The last claimant for undergraduate favor is the *Penn Dental Journal*, published by the students of the University of Pennsylvania Dental Department. The communications

are very well written and the *esprit de corps* as shown in the photographic groups of the fine young fellows who constitute the James Truman, the Edwin T. Darby, and the Edward C. Kirk Societies is very interesting. The fidelity of the teachers in the American schools is thoroughly appreciated.

Appleton's Popular Science Monthly for June contains several especially timely articles. "The Evolution of the Modern Heavy Gun," by Prof. W. Le Conte Stevens, describes the wonderful advance made in this department during the last fifty years. "The Silent City of the Muir Glacier" is a sharp little article by President David S. Jordan, giving another illustration of the gullibility of the average citizen. David A. Wells's series is represented this month by a chapter on the "Forms and Nomenclature of Taxation," in which he deals at some length with the relative value of the direct and indirect forms. "Suicide and the Environment," by Robert N. Reeves, is a discussion of the causes for the increase of suicide during the last decade. In the June installment of Prof. W. Z. Ripley's important series on "Racial Geography," he shows that the notion of a single European or white race is untenable, and that there are evidences of three original and distinct types. "Globe Lightning," by M. Hagenau, gives a number of instances where this curious electrical form has been witnessed, and some speculations as to its probable cause. W. H. Ballou contributes a timely paper on the coming congress of the "World's Geologists at St. Petersburg." Mrs. Helen Kendrick Johnson discusses the important question of "Woman Suffrage and Education," and shows the stupidity of the clamor for the general admission of women into men's colleges, as if women could obtain education in no other way. Some interesting data regarding the early use of alcoholic drinks are given by Dr. C. E. Pellew in a paper on "The History of Alcohol." "The Public and its Public Libraries," by John Cotton Dana, deals with the best methods and ideals for the modern public library. The important place which science holds in modern education is called attention to by M. P. E. Berthelot. The subject of the "Sketch" this month is Richard Owen, of New Harmony, geologist. "Pernicious Legislative Activity" and "The Postal Union Congress" are the titles in the Editor's Table. New York: D. Appleton and Company. Fifty cents a number; \$5 a year.

Dominion Dental Journal

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All Communications relating to the Business Department of the Journal must be addressed to DOMINION DENTAL JOURNAL, Room 97, Confederation Life Building, Toronto, Canada.

VOL. IX.

JUNE, 1897.

NO. 6.

"OUR QUEEN! GOD BLESS HER!"

It is always in order for Canadians to give expression to their loyal devotion to their Queen. There is no incongruity in a purely professional journal uniting with the daily press in repeating our pride in our allegiance, our unswerving fidelity to British institutions, and our gratitude to the King of Kings for having given our Empire so wise and good an earthly sovereign, who has reigned in the hearts of her people for sixty years. Quite apart from the interesting retrospect of the progress of dental science and art within that period, we are more than justified in the contemplation of Britain's greatness, and her influence for peace, while as the Canadian outpost of that Empire, we may feel a modest pride in our own share in its development.

Sixty years ago the science, art and literature of dentistry were meagre. Hunter, Sydenham, Sir Astley Cooper, Sir Charles Bell and Robert Blake had contributed works of some merit upon the natural history and diseases of the teeth. Mr. Joseph Fox, Surgeon Dentist to His Royal Highness the Duke of Kent, father of Queen Victoria, Mr. Thos. Bell, and others, published excellent works, illustrated with copper-plates, on the structure and diseases of the teeth. One could not obtain to-day a more comprehensive

idea of the progress of dentistry than to compare these productions, and the principles and practices they enunciated, with our modern text-books and journals. It would be a fascinating story for some of our contributors to undertake, and it is *apropos* to remember that the first movement which had any practical result towards the organization of dentistry as a distinct profession was almost coincident with the accession of the Queen to the throne. It is here recalled merely as a coincidence ; but it is well to remember that no previous sovereign recognized so fully the importance of the dental profession as our own beloved Queen. The honor of knighthood, conferred upon the late Mr. Tomes, was a distinct recognition of her intelligent knowledge in this direction, while that of Sir Edward Saunders, added to his own personal worth, gave a social status to the profession in Britain almost equal to that bestowed upon the older professions of law and medicine.

Her Majesty, and indeed all the members of the Royal Family, have earned the love of their subjects, not because of any awe-inspiring or ancient reflection from a royal throne, but more because they have individually identified themselves as much as possible with the sorrows and sufferings of the people and have labored for the amelioration of the condition of the poorer classes. No worthy object of public benevolence has ever appealed to their recognition in vain, and if anything has tended to make happy the life of the sovereign it is the recollection of the early and constant devotion to the same objects of her late Consort, "Albert the Good." Not only the British Empire, but the world at large, has been the better for the example and the faithful labors of the Queen and Prince Albert.

To our cousins over the border, some of whom may wonder at our testimony in this place to the Queen we love, we have only to retort in kindliness, "Your kindly people have fully respected her ; your best men and women have felt the value of her influence ; your Presidents have one and all borne testimony to the blessing the British Empire enjoyed in having a woman on its throne who has completed a reign of sixty years without a stain upon her personal or official life."

Few countries in the world have made greater progress in a quiet and substantial way during this reign than Canada. We are not given to rhetorical outbursts of bombast as to our progress. Our future, as we Canadians are more than ever determined to make it, as an integral part of the British Empire, will demand from us more unselfish service in the interest of Imperial unity and peace. In these interests there is no sacrifice, no suffering too great.

FORGIVE BUT NOT FORGET.

“Is there any use in preaching professional morality? Is there any hope of converting the quack and the quack imitator from the unethical error of their ways? Is there anything to be gained in favor of the dignity and respectability of the profession, by classing these practitioners among the goats, and stigmatizing them by a code of ethics?”

If this method of reasoning were applied to public morals, we might dispense with the pulpits, we might relax the moral restraint of public opinion, and let legal restraint degenerate. Shall we cease to raise the voice of warning against vice because sin is so common? Shall we stop fighting the drunkard-maker because the rum-shop flourishes? Shall we begin to believe that there is no use in jails and penitentiaries, and that criminals can be converted into shining lights of sainthood by mere moral suasion? Philanthropists there are who object to capital punishment, but even they do not propose to abolish the penitentiaries—just yet.

That sort of sentimental theory is pretty well exploded. We invite our readers to name one instance in the whole history of humbug and quackery, when a quack was persuaded to become an ethical practitioner by “brotherly love.” We can name several where they have been influenced by public exposure, and the fact that their quackery did not pay. Our civil courts have the records of others, who were only “persuaded” by the powerful argument of prosecution. If the quack feels that he can be indifferent to the ethics which govern the rest of us, until he makes a practice—and perhaps money—by his imposture, and can then in a twinkling abandon his quack methods, and claim equality with men who have always been ethical, the fundamental idea of the code of ethics becomes fictitious. The thief may reform, and become honest, but he has to suffer forever the penalty of his crime in the public suspicion and avoidance. Men who have always been honest do not take kindly to reformed thieves, however much in their hearts they may pity them. We have no sympathy with the flabby sentimentality, which thinks that the open quacks can ever be accepted in ethical society upon a par with those who have always been ethical. We may forgive a reformed quack, but he cannot undo the mischief he did, either to himself or the profession. The sinner may have his sins forgiven, but no power on earth or in heaven has ever enabled him to obliterate the direct penalty of his sin. Variola may be cured, but the marks remain. When those who are tempted to imitate quack methods fully realize these facts, the temptations to err will have more restraint.

A VERY WISE RESTRICTION.

A wise law has been inaugurated in Ontario with reference to the number of students each licentiate can have indentured. Many unfortunate young men were induced by the quacks and the quack-method imitators, to swarm into these offices, not only by false representations, but by promises of a commission on cases they managed to secure outside, and in several instances a licentiate has had no less than seven and eight. The students did the bulk of the artificial work in the laboratories, and made themselves generally useful. It is natural to expect that those among them who discovered the cheat would hasten to seek release, and that those who were of the same kith as their "preceptors" (!) would turn out, in time, full-fledged quacks. The same wholesale manufacture has been going on in Quebec by the same kin, and the Quebec Board would do well to stop it at once. In spite of the proverb, it is sometimes "too late to mend." The Ontario Board has passed a law prohibiting any licentiate from indenturing more than two students. The quacks do all they dare to degrade the profession. The Boards should in every constitutional way do all they can to expose and throttle the quacks.

AT LAST!

For many years we have been hammering away through the JOURNAL, in addresses before Associations, etc., on the subject of the duty the profession owed to the public, to supply some antidote to the presumption and the fraud of the quack advertisers. Everybody had a panacea, but nobody applied it. It would have been far more satisfactory if something had been done years ago, but better late than never. So far as the scope of the JOURNAL permitted, we feel that we have been doing our duty; but if the principles herein advocated have not been brought before the public through the press and otherwise, it is the fault of the profession individually and collectively. It must be apparent to our readers, that it is hardly our province to do this work for the public as well as the profession. That the JOURNAL has been influential in dissuading some practitioners from following in the wake of the quack advertisers, we may venture to assert with emphatic modesty. That it has shamed a few into silence, no one knows better than the Editor. That it has not succeeded in cleansing every stall in the Augean

stable, is the fault directly of our readers who deplore the state of affairs, and who suffer by it, and who had made no organized effort to educate the public to avoid it.

At last, however, the Toronto Dental Society has made a move in the right direction. The papers read at its meetings by Drs. Pearson and Martin, published in our last issue, offer practical and practicable suggestions, and there is no reason now why a united effort of the respectable dentists of the Queen City, and the expenditure for the object of a few dollars, should not succeed. One of our correspondents, in the present issue, suggests a united scheme of ethical advertising, which, added to those made at the Toronto Society, would not only be a measure of justifiable self-defence, but one of individual and collective benefit, as well as one that would get the public to reflect. The quack succeeds in getting business because he knows that a large proportion of the public does not stop to think. The departmental stores know this too. The patent medicine men know it too. All humbug flourishes because its patrons do not think. A quack advertisement, especially to country readers, is as infallible as the ten commandments. Indeed it is frequently much less questioned in practice as well as in belief. The public must be taught to think, and if they are not taught in the right direction, they will be in the wrong. Truth, too, must not only be told once ; it must be iterated, and reiterated.

PATRONIZE OUR ADVERTISERS.

We repeat this request in the interest of our readers as well as our own. We mentioned this before with reference to the dealers of dental goods, and we cannot emphasize it sufficiently. It costs our subscribers no more to deal with these houses than with those who hold aloof. They are entitled to the patronage the dentists in the Dominion have to bestow.

We wish to make special mention of the Canadian Pacific Railway in this connection. It has been generous enough to advertise in our JOURNAL, and we think it only fair to suggest that the dentists should make preference of this splendid line whenever possible. "Do you know Canada?" What a suggestive idea for the holidays. "It is shameful for a man to be ignorant of his own country," was said by an ancient philosopher. How much truer in modern times. From Halifax to Vancouver! What scores of fascinating trips! The Canadian Pacific Railway is the backbone of the Dominion. In this Jubilee year, Canadians ought to know their own great country better than ever.

EDITORIAL NOTES.

THE first attempt at departmental dentistry in Toronto has gone up in smoke.

WHEN Dr. N. Pearson, dentist, whose office is in the building joining the ruins of the John Eaton store, came down to business the morning of the fire, water was dripping from the ceiling, and the carpets were soaking wet. The doctor, who is a cool headed man, thought there was a change in the weather, so he put on his rubbers, elevated his umbrella, and went on manufacturing teeth in his serene, unruffled way, as though nothing had happened.—*Toronto paper.*

IN reply to many inquiries about Dr. Haskell's Post-Graduate School of Prosthetic Dentistry, we wish to direct attention to the change of location to 1209 Stewart Buildings, Chicago. It is the oldest and most successful post-graduate dental school in existence, and has been of invaluable service to many of our progressive dentists in Canada, as well as of the United States. We trust Brother Jonathan will not pass an alien law to prevent the wide-awake Canuck from attending it.

THE Royal College of Dental Surgeons of Ontario has secured the most complete library of journals and text-books in Canada, which are being classified and placed on the shelves. The list comprises some very rare works. It is intended to proceed with the collection of models and pathological specimens, to which many practitioners could easily add, instead of having them lying idle over the Province. They would not only be available in the instruction of students, but would very much increase the interest of the annual meetings of the Association. A hint to possessors ought to be sufficient.

"DENTAL PIRATES."—We were sitting in an opera house not a thousand miles from Toronto, during the production of Gilbert and Sullivan's opera of the "Pirates of Penzance." In front of us sat several ladies. During the intermission of the acts, they amused themselves by reading the advertisements of the programme, among which was that of one of those degrading dental cards which the quacks and quack imitators know so well how to use. One of the ladies remarked: "I suppose these are what you may call 'pirate dentists.'" "Oh! you can easily tell that. No respectable dentist would descend so low." That sort of advertising has its day, as in Montreal it generally ends in a sheriff's sale.

DR. W. C. BARRETT is a man after our own heart in many ways. He hits hard, and can take hard hits, and if he happens to hit below the belt he takes the consequences. And when he goes for an out and out impostor, he generally uses him up in one round. Recently he has been disciplining one T. B. Engleheart, A.M., M.D., Ph.D., *Precis.*, who assumes to be at the head of a college of Arts and Science in Buffalo, able to confer the degree of Doctor of Dental Surgery, and whose circulars have been freely sent to Canada. Dr. Barrett says: "T. B. Engleheart is a swindler. There is no one in Buffalo entitled to grant the degree of D.D.S. save the Dental Department of the University of Buffalo, and its diploma cannot be obtained except by those who have primarily graduated from an acknowledged High School, and afterwards spent three full years in the study of dentistry in an acknowledged dental college, the last being here; and shall have passed all the necessary examinations and been approved by the Council of the University. T. B. Engleheart is an old offender. He is uneducated and uninformed. His pretended degrees are self-conferred, and he has no more standing in this city than another swindler." We had several inquiries a year ago about this rascal. We are glad to assist our contemporary in exhibiting the knave's true character.

Post-Card Dots.

14. What is Nasmyth's membrane? Please decide a controversy. (R. McG.)

One cannot pretend to "decide" anything. The orthodoxy of to day was the heterodoxy of yesterday. But Prof. Paul, of Liverpool, recently advanced the idea that Nasmyth's membrane is not, as has been taught, a thin layer of cementum, but that it is merely a remnant of the enamel organ. Mr. Charles Tomes accepts Prof. Paul's views.

15. How can I prevent black rubber from becoming porous? (R. L.)

A correspondent in the *Journal* of the British Dental Association states that porosity is caused by vulcanizing at too high a temperature, and advises vulcanizing at 300° for one and three-quarter hours. If a thermometer is used do not let it exceed this heat; if a pressure gauge, seventy-five pounds pressure for the same time. "The thermometer gives the temperature of the lid, and not the temperature of the inside of the vulcanizer."

16. Where does the British Dental Association meet this year?
(B.)

In the Medical School Buildings of Trinity College, Dublin, August 17th, 18th and 19th.

17. Is the anæsthesia of eucaine slower than that of cocaine?
(L.)

Yes. Five to ten minutes must elapse before operating, but it is fully equal to cocaine; its duration is from ten to twenty minutes. It seems to have a more exciting effect than cocaine in increasing the salivary secretion.

18. Who is the oldest living French-Canadian practitioner?
(J. B.)

Dr. C. F. F. Trestler, whose genial countenance was portrayed in No. 4 of Vol. 1. Dr. Trestler is the type of an ethical French-Canadian practitioner, and enjoys the respect and affection of his confreres.

19. When was the portrait of Dr. W. D. Miller published in the DOMINION JOURNAL?

March, 1891, No. 2, vol. 3, with a charming description of his life and labors by his friend Dr. W. C. Barrett.

20. Can you recommend a work on hypnotism which will enable me to follow further the writings of Dr. Fillebrown on its nature and uses? (A. B.)

"Suggestive Therapeutics," by Dr. Bernheim, published by Putnam's, New York. If we are not mistaken, Dr. Fillebrown recommends this work.

21. Has Dr. L. P. Haskell ever published a work on prosthetic dentistry? (T. B.)

Yes. The Student's Manual for the Laboratory, costing \$1.50

22. Is there any way to prevent the clouding of mouth mirrors?
(J. S.)

A timely reply is found in a recent issue of *Ash's Quarterly Circular* by Mr. Geo. Wallis, L.D.S. To prevent clouding simply smear a thin layer of ordinary soap, soft but not moist, over the surface of the mirror, and then polish it with a dry cloth. The effect is that however much the mirror may be breathed upon its reflecting surface remains clear and bright. This can be used in laryngology with great effect, rendering it quite unnecessary to warm the instrument before using.

Obituary.



DR. JOHN GENTLES.

It is with a sense of personal bereavement, as well as a realization of professional loss, that I chronicle the death, by drowning, on the Queen's Birthday, of Dr. John Gentles, of Montreal, in his thirty-second year. Death, which must come to us all, never wakens so much sympathy for survivors as when it is met in unselfish sacrifice for the lives of others ; and it was this, as well as his own sterling goodness of heart and geniality, which made the loss of Dr. Gentles more like that of a public citizen than of a quiet dentist. In company with several friends and an Indian guide he was enjoying a few days' fishing on the Maskinonge River. He and the guide entered a small boat for the purpose of running the Cedar Rapids. The swell swamped the canoe, but both of the

occupants succeeded in holding on. The water was icy cold and the Indian, first assuring himself that Dr. Gentles was all right, struck for shore. The boat had gone down the stream, and while Dr. Gentles was swimming ashore, Fred Epps, the local hunter, who was also one of the party, and who was on the opposite bank of the river, waded in, caught him under his arms and started to help him on shore. Dr. Gentles, however, with his usual unselfishness, told him to go back and look for the Indian, whom he thought was still in the water. Epps was swimming on his back against the current, when he threw up his arms and disappeared. The Indian and Mr. Dodds attempted to save him without avail. In the meantime it is supposed that Dr. Gentles got a cramp and was unable to reach the shore before he sank. The bodies were not found until the 26th.

"Jack," as we all called him, came to me as an office boy when about twelve years old, with no idea of studying the profession. He remained about six years in that position, during which time he made himself so familiar with the routine of the laboratory, and showed such sterling fidelity, that I proposed to indenture him. When this was done, his industry was remarkable. It was before there was any dental college in the Province, but he applied himself assiduously to a course of reading in the principles of dentistry, besides attending a partial course in McGill. Having been thoroughly cured of the impediment of stammering, he rapidly gained self-confidence, and when he entered into practice for himself soon secured a good business. His popularity was well-deserved, for his honorable career was an object-lesson to every student and young man in the profession.

The funeral on the 28th was one of the largest private funerals Montreal has ever witnessed. The Montreal Dental Club, the Holly Snow Shoe Club, the Fish and Game Club, the Thistle Curling Club, the Masons, the Royal Arcanum, etc., were represented, and the room in which the body lay was simply piled up with lovely flowers in appropriate designs, to which Dr. and Mrs. G. L. Curtis, of New York, the Montreal Dental Club, and individual dentists contributed. The flag of the Dental College was flown at half mast. The funeral service was a tribute of remarkable respect.

W. G. B.

Dominion Dental Journal

VOL. IX.

TORONTO, JULY, 1897.

NO. 7.

Original Communications

A LITTER OF SUPERNUMERARY TEETH.

By G. LENOX CURTIS, M.D.

A patient aged 21 years, with a history of a full set of deciduous teeth and no extraction of the permanent set, presented herself, complaining of pain and some swelling in the jaw near the symphysis. Examination revealed the absence of the inferior left lateral incisor, the left central being slightly loose and tender on pressure. A slight space intervened between this and the cuspid, the cusp of which was tilted forward and the apex well back, encroaching upon the bicuspid. Suspecting an unerrupted lateral, a shell probe was passed through the gum and periosteum until a glistening subject resembling enamel was reached. The patient was so highly sensitive and hysterical that further examination was deferred until the time of operation. An incision in the gum was made directly over the tumor at the apex of the root, the periosteum was opened and laid aside so as to expose the contents. Here were found seven teeth nestling together in a cavity about the size of a denuded peanut. The roots were like the spokes of a wheel radiating outwards, some almost penetrating the gingival margin of the gum projecting above, while others were close to the lower border of the jaw. The cavity in which they were confined was perfectly smooth and without a soc. The roots of the teeth were pointed like tacks and were from one-sixteenth to a quarter of an inch in length. The crowns uniformly being an

eighth. They closely resembled small inferior incisors of the temporary set. The crowns of only two showing clear enamel, the others being clump shape with a growth of yellowish color much resembling exostosis. On opening the teeth I found they contained a pulp same as a normal tooth. This beats my record by four at a single birth. Around one of the largest teeth was a so highly inflamed filled with fluid, and from this, no doubt, the trouble arose.

7 West 58th St., New York.

RETIRING PRESIDENT'S ADDRESS.*

By IRA BOWER, L.D.S.

GENTLEMEN,—I am much pleased, I assure you, to see so many of the dentists of Eastern Ontario present at this our eighteenth annual meeting, and taking an active interest in the Association; but I regret to see so many pay little attention to that which should ever be their watchword, "The Advancement of the Dental Profession" and the welfare of the Association, for, sirs, the members of the profession to-day, and particularly the recent graduates, owe much to the Eastern Ontario Dental Association for the work it has done in the past, and of which they now reap the benefit. The College, gentlemen, is something they can look back to, or point out with pride to their friends, and say, that is our *alma mater*, whereas we the older graduates have nothing except the ramshackel on Louisa, or perhaps Richmond Street that the old Board provided. I mention this because I believe that the profession are indebted to this Association for that beautiful building, and I think that we should ever impress it upon the minds of our students what we have done in the past, and how they benefit by it, and if we did so I believe they would assist us by their presence, and would also contribute material that would no doubt be of interest and benefit to each of us, and make our annual meetings more attractive. I do not intend taking up your time by talking about the advancement the profession has made during the last year, but you all know that we are steadily getting to the top, that our profession is not treated as a trade by the intelligent, and that we are now numbered with the first and highest in the land; so let us all try to uphold and treat it as such.

There are a number of things I would like this learned body to discuss at this meeting, viz.:

1. The manner in which American matriculants are admitted.

* Read before the Eastern Ontario Dental Association, July 6th, 1897.

2. The question of jury duty.
3. The granting of D.D.S. to those members that did not have the opportunity of writing for it.
4. Dominion license.
5. American students working in Canadian offices.

The programme this year, you will notice, varies a little from the usual, but I think you will agree with me in saying, that it is not lacking in attractiveness; and I must say that our secretary is deserving of much praise for the indefatigable manner in which he has worked on this programme, although suffering from illness. And the food you have for thought is different from what you have ever had before presented you at this Association.

A WORD FROM AN OLD FRIEND.

By CHARLES A. MARTIN, L.D.S., Ottawa, Ont.

I regret exceedingly that I am unable to be present on this occasion, the eighteenth anniversary of our Association. The pleasant recollections of former meetings, and the particularly hospitable and entertaining receptions always given by our Cornwall brethren, are inducements hard to resist. But in my case the increasing care, and the responsibility of a large family, requires, for the moment, my constant attention and presence at home.

If the attendance at the present meeting shows increase in numbers, if the large addition of licentiates graduated since the inauguration of our Association contribute a reasonable proportion of their number by assisting in active participation, then I hope to see a return of many of the eighteen-year-old members, to add impulse and enthusiasm, and keep in existence an Association which has done so much acknowledged good, and has proven to be a power in our legislature.

I regret that there is a persistent tendency in many dentists to be isolated, to keep aloof from gatherings of professional brethren. Whether they are justified in doing so is best known to themselves, whether they derive greater pecuniary benefit is questionable. Do they generally acquire greater proficiency? By their conduct do they obtain greater public confidence? Does society show them preference? Or, is it because some are prosperous that they see no need of Associations? Or, is it because they do not wish to conform to any code of ethics? Being free from any association rules, do they resort to underhand methods and tricks and fraudulent acts, to temporarily increase their revenue to the detriment of

* Read before the Eastern Ontario Dental Association.

their fellow-practitioners? Do they generally succeed? If individually successful, is it permanent, and what effect has it and will it have on the standard of the profession? Does the modern dental practitioner command as much respect from his patients as the dentist of forty years ago? Let the old practitioner answer. A noticeable difference is in the attitude of the public. The general public enter a dental office now with no more deference than when entering a shoe shop! They price the *goods* and comment on the different makers of material; no doubt the youthful, isolated dentist has imparted all the information voluntarily, and has educated the *customer* how to discriminate between the goods he offers and those of the other fellow across the way. The people have become posted and will not be bamboozled. Of course this applies only to the shopping class, still the custom is noticeably spreading among the more intelligent.

The professional standing is being lowered by the individual acts of unscrupulous dentists, who desire to monopolize the practice of the community in which they exist. It may be, perhaps, that some are induced to isolate themselves from associations, so as not to be in company with some *plebian* dentist! Whatever is the cause, the results are regrettable. The one great factor for elevating the standing of the profession, as a whole, is sadly neglected. The united efforts of the best minds would no doubt render nefarious the conduct of the reckless dentist, and compel *all* to join the faithful fold (*millennium*). Certainly individual action on the part of honorable dentists retards general disaster, but united action would be more effective. Well, what are you going to do about it? I anxiously await your discussion on the subject.

May you have a large and profitable meeting, and may the results prove a stimulus to greater activity among a greater number.

ELEMENTS OF DENTISTRY.*

By V. H. LYON, L.D.S., Ottawa, Ont.

In bringing before you the contents of this paper I have a desire more to consider the elements of dentistry in its broadest sense rather than in the narrow, and, I regret to say, narrowing sense of the dentists' duties. While noting the fact that so many of the profession are looking upon dentistry merely as a means to obtain a livelihood, I am glad, at the same time, to note also in others a growing spirit of true professionalism, and that for so long this spirit has enabled the profession to maintain a respectable status

*Read before the Eastern Ontario Dental Association, July 6th, 1897.

in the estimation of the people, but, unfortunately as our numbers are increased we are aware of a lack of appreciation of dental skill. I wish our graduates were more grounded as to the true extent of their field of usefulness as professed benefactors of the human race.

I need not dwell upon the necessity for proper dentistry at the present time both as reference to this and future generations, for never did humanity call as loudly for the assistance of any profession as it does to ours to-day, it may be unconsciously and without appreciation of the true value of skillful dentistry either practically or in advice ; but no dentist (if he honestly has the merit to be called such) is ignorant of the possibilities or probabilities of proper, intelligent dental skill as applied to the present generation.

I know the great and deplorable tendency of the people to-day is to gain, apparently, the *most* for the *least*, and so far has this tendency developed in some as to almost demand *all* for *nothing* ; but even many in this latter, poor, misguided class, will gladly, willingly acknowledge in regard to the professions that the man who stands foremost, and whose fees are usually the highest, is the best and cheapest in the end, and if at all possible and within their means, will invariably consult him. What inference, then, can we, must we draw from this practical demonstration of acknowledgment of the superior value of the educated practitioner coming as it does from the very source and root of the general excuse for unprofessionalism ? And I use this word this time in a somewhat restricted sense, for I only refer to ignorance in matters pertaining to dentistry, and I tell you it is entirely due to this lack of education in professional and moral principles that we hear so much of quackery and charlatanism. The man of worth can, and always will, overcome his unscrupulous and uneducated rival.

I am more inclined to favor a system that will advance educationalism among the members of the profession rather than one of denunciation of the fruits of their ignorance. I do not wish to pose as an exceptionally well-informed member of the dental profession, it need not necessarily be considered as an essential of one who can see defects in his profession ; even the most devoted adherent of quackery can see and must acknowledge the advantage superior education would be to himself ; how much more, then, would it be to professional dentistry ?

Education is a power that may or may not be wielded for a beneficial purpose, and it is only as we thoroughly understand every phase of any certain condition that we are enabled to make the most of it, and again, it is only as we fully and intelligently recognize the necessity for it that we are going to place dentistry where it properly belongs,—the acknowledged sister science, and not a specialty, of medicine.

A thorough understanding of the principles of dentistry involves

as complete a knowledge of medicine. I would not be misunderstood in making this reference. I have no desire to see our grand profession usurped by any other, we have a special field of usefulness, but what I wish to see is a thorough medical course instituted in connection with dentistry, and the graduate in dentistry in consequence necessarily acquiring certain knowledge the professional dentist ought to possess.

There is, I am glad to say, an inherent quality in all men which hungers for knowledge; in some this desire becomes so great that the individual is prompted to search for it and glory in it, both for personal and general benefit; this spirit is what characterizes true professionalism. The man who is satisfied to complete his store of knowledge on graduation must be content to remain on the bottom rung of the ladder of his profession, and when his superiors in matters concerning his profession gradually leave him far behind his resort for recognition and it may be a livelihood must be of a nature degrading to his profession as well as his manhood.

I regret to say that a great number of our dentists are seemingly totally averse to acquiring more knowledge than they consider is necessary to "gull" the public, for I must admit this class of men cannot do otherwise than look upon their services wholly with reference to fees and with a total disregard of doing the best under the circumstances, and with such conditions governing their services the public must suffer and reflect upon dental worth.

It has been my aim to point out the positive necessity for professional dentistry as well as denounce deception. The dentist who does not make himself thoroughly conversant, as far as lies in his power, with all matters pertaining to dentistry, is a disgrace to his profession, and the public do not want his services, although they may be persuaded to accept them by various methods of deceit.

I am glad for our high class of dental literature, yet I regret so many who could give the profession valuable ideas are so reticent. The younger members look to the older ones for the essence of their experience. I do not believe it is denied them because of a selfish desire to keep it to themselves, but from a mistaken idea that they could not place their ideas on paper. I hope this timidity will be lost in the interests of humanity and the profession.

There is material and thought in the Canadian branch of the profession of dentistry to support a journal of dentistry equal to any in the world. I am persuaded that it is practise which enables us to place our thoughts in readable form, so none of us, I think, who are novices in this department would object to a reconstruction at the hands of older and more experienced writers, when the object to be attained is the enlightenment of the profession, and now while dwelling upon this most important feature of educa-

tion I would like to express a sincere desire that a paper or journal be instituted in connection with the College of Dentistry; this would stimulate the writing of articles by the embryo profession and overcome the vast difficulty of timidity after graduation.

While referring to the School of Dentistry I should like also to express a hope that it shall soon be equipped with a gymnasium, a library and a reading-room.

My whole desire in connection with our profession is to raise it to a higher standard morally, physically and intellectually. I do not look upon any branch of education as complete without physical training, and as regards library and reading-room facilities, who can estimate the benefit to the profession? I cannot too strongly condemn for its narrowness the complete system of study in our college. What we want is broad-minded thoughtful men. No institution is fulfilling its duty which does not make the best of its graduates, and I regret that our School of Dentistry, which is to many the final school in their course of education, falls so far short of doing this. True, it drills the principles of dentistry thoroughly into the students; but is this all that is required? Should not our students be impressed with the fact that they as professional men are supposed to know something outside their professional duties? I regret the ignorance and narrow-mindedness among many of the members of the dental profession, but the brain is there, I believe that. I believe also no profession embodies better men than our own; but the intellect is deplorably neglected and cramped in its stage of development. What a great benefit to the rising young men who are entering our profession to have access during their college course to a carefully selected, well-equipped, dental and general library!

We cannot, I say, estimate its possible value to humanity and the profession of dentistry, and the revenue of the college is more than amply sufficient for this purpose.

The cry of the profession is seemingly to decrease its members. The cry is timely, but were these numbers men of broader intelligence and principle, the cry would be for more of them. Of this class the profession wants and needs more, and we ought to do all we can to make such a condition possible, otherwise we cannot blame the numbers for entering our profession; they have as much right in it as we have. We can only look to ourselves for a remedy, if we can cultivate true, deep professional thought in the minds of the profession, students, and graduates as well, we need have no fear of an overcrowded profession, nor an unappreciative clientele. We cannot expect merit to be appreciated where it is not, we cannot expect the dental profession to be looked upon as a learned profession till it is such. You may consider my judgment somewhat harsh; it is not so. I do not consider the man a clever

lawyer, physician, or dentist who knows much about his professional duties and nothing beyond. The educated man is gauged by his generality of knowledge, the learned professions are conspicuous in the breadth of knowledge of their members. If we can place greater facilities for the acquirement of increased education among the members of the profession, it is our duty to do so, and just as we should like to see, and as we believe our profession ought rightly be considered, let us place our students, the profession to be, in surroundings mostly conducive to such a condition; otherwise with no effort towards such improvement we can expect none.

Outside the educational element, I regret to note the utter incapability of many of our profession to perform either to the credit of themselves or professionalism, the duties necessarily devolving upon them, from a moral standpoint. I will only make a passing reference to this; not that I wish to minimize its importance, but because its truth is already fully impressed upon us. It needs little consideration to convince us what lowers the individual dentist in the estimation of the people redounds to the detriment of the profession as a whole, it cannot help but do so. If we wish our profession to rise in respect, we must ourselves be worthy of respect, and by no means the least element to be considered toward that end is one of prompt capability at all times to perform our professional duties, and the dentist is unworthy of professional standing who is voluntarily responsible for such a condition as debars him from doing so.

And now lastly, and with due appreciation of its importance, I refer to our social attitude toward our patients and the world. Covering a multitude of defects a thoroughly sociable disposition has won for many a professional man a lucrative practice, a kind, sympathetic nature prompting the operator in the manipulation of his dental and surgical instruments is only second in importance to the highest skill. The gruff, unfeeling dentist, regardless of greater experience, or supposed superior knowledge must sooner or later become humanized or retire. Our sphere will be broadened and the profession elevated when we get from our ranks this element of barbarism. The thorough performance of our duties invariably necessitates suffering; the operator who unnaturally increases it without reason, is not only unworthy the confidence of his patients alone, but forfeits all right to social relations with his fellow-beings. The professional cloak has long permitted liberties which among the laity would righteously be condemned; the unlicensed infliction of pain is contemptible, and when coming from a presumably educated, so-called benefactor of the human race, is little short of criminal.

Beyond our attitude toward our patients and maintaining with

them the highest social relations, there is required of us friendly, equal companionship with the world. As a profession we are endowed with knowledge and skill of inestimable value to humanity; but if we incorporate with it a degree of barbarity, we cramp its appreciation and destroy its fullest application as a boon and a benefactor to the human race. The remedy is such that it only calls from those who are guilty the practising of the common principles of humanity, and if they are incapable of such their sphere is not as exponents and practitioners of our worthy profession.

ECONOMY IN DENTAL PRACTICE.*

By R. E. SPARKS, L.D. S., Kingston, Ont.

The great social question of the day—the question which agitates the minds of all social reformers, and stares in the face all statesmen is, how shall the masses be fed? We cannot close our eyes to the fact that this problem must soon be solved. The young men who rush into the profession thinking that, as far as they are concerned, they have solved it, will find some fine day that the question which had appeared as a molehill has become a mountain, that the question will include themselves. The rapid development which has taken place upon this continent in the last century has made a great demand for labor. That demand has made wages of all kinds high. But that development has about reached its high-water mark. Take, for instance, the tremendous amount of labor, manufacturing and business created by the building, equipping and operating of the net-work of railways and telegraph lines over the continent; to this add the thousands of villages and towns, and many of even large cities, which have sprung up during the time mentioned. To this again add the clearing up and bringing under cultivation of, and providing buildings for, the farms which provide food for the millions who have been attracted to this continent from the overflow of the old world. War with all its extravagance and devastation is, we hope, through the influence of Christian enlightenment, largely a thing of the past. All these influences tend to lower the demand for men and increase the supply. This decrease of demand and increase of supply is bound to lower the scale of wages. This lowering of wages will apply to all classes, from the navvy who digs a ditch to the judge who sits on the bench. Labor organizations may fix a schedule of wages, professional societies may attempt to regulate the fees of their

*Read before Eastern Ontario Dental Association July 7th, 1897.

members, but remuneration for services will be governed not by the value of the services rendered so much as by the demand and supply of the servants; already we are feeling this in the dental profession. We see and hear discussed ways and means of excluding the hordes. This cannot be done. The lowering of remuneration for manual labor drives many into mercantile and professional pursuits. You may raise the standard of matriculation, lengthen the term of tuition, increase the college fees and stiffen the final examinations. All these conditions will be met and fees will come down as in all the trades and professions. This is not a plea for cheap dentistry, nor any apology for the lowering of fees before there be a necessity for it; neither is it an insinuation that we are too well paid for our services. It is only a prospect of what I consider an inevitable condition in the not very far future. How to meet it is a question of no small importance. The only way it can be met in my opinion is by economy. There is no doubt but that we on this continent are most extravagant livers, indulging in luxuries which the same class of Europeans would not dream of.

The one redeeming feature of the lowering of wages in competition is, it lowers the cost of production; so that while the purchasing power of the masses is reduced, the purchasing power of a dollar is increased. This is not so noticeable in the dental office as in the home. Still, where our material and instruments are expensive, the lessening of the cost becomes a factor in profits of a year's practice.

Combines may be formed, and every effort made to keep up prices of goods. They must come down. Already they are on the move. Price lists are being circulated with the announcement: "Reduced from—to—" This reduction ranges from $6\frac{1}{4}$ per cent. as in the case of gold foils, to $33\frac{1}{3}$ per cent. as in the case of some makes of teeth, to 50 per cent. as in the case of some cements and alloys. Some of the manufacturers would fain have us believe that it is their magnanimity being manifested, that it has merely been a question of how soon and how much. As we have watched them corner the platinum market and advance the price of teeth, form combines to keep up prices of goods, it has appeared to us that it was rather a question of how long and how little. But leaving the necessity of economy out of the question it may be profitable to consider the subject as a matter of policy. While few of us expect to amass wealth from the practice of our profession, we all hope to lay up a little for a rainy day, or for that time which must come to us all, when the eye grows dim and the hand begins to lose its cunning, when we begin to see our patients leave us for our younger and more active confreres.

In no case more than in the dental office and laboratory is realized the truism, "wilful waste brings woful want," and "economy

is the sure road to wealth." It is not the amount a man earns as much as the amount he saves that governs his financial standing. Granted that economy is desirable in dental practice at all times, the question arises, how can we economize? First, in the selection of an office. It is desirable to have an office in a respectable part of the town or city. But there are in every city locations where office rents are nearly double the rent for the same accommodation in any other part, which, for dental purposes, may be just as desirable. Then the selection of an office governs the saving or waste of many things that are valuable to a dentist. The rooms should be compact so they may be more easily heated; for the fuel bill in a Canadian winter is no small item. Besides compactness and convenience of arrangement saves time and strength, both of which are important items in the dentist's stock-in-trade. The office should be well lighted. The fine work in an obscure location makes no ordinary strain upon the eyesight under the most favorable circumstances, but to operate in a poorly lighted office is an imposition which no ordinary eyes will tolerate for many years. The best light can generally be secured in upstairs rooms. The office should be away from the residence to avoid having to work at unseasonable hours.

We should practice economy of strength. The dental profession is considered to be one of the most unhealthful of occupations. Close confinement, close application, breathing the breath of patients' and in many cases of those diseased in lungs or schneiderian membrane. In many cases, long hours operating during the day time and doing laboratory work or attending to books and correspondence at night; all this tends to bring on indigestion, constipation, hæmorrhoids, headache and neuralgia from over-worked eyes and brain. The laboratory should be close to the operating room to save unnecessary steps. In no case should the laboratory be on a different flat from the operating room. As the basement kitchen is an abomination to a residence, so is a dental laboratory above or below an operating room.

The arrangement of a dental office and the care of a dentist's health would make fruitful subjects for lengthy papers. Therefore we cannot more than mention them here; the object of this paper being more directed to the little wastes which may take place in a dental practice. Time may be saved by carrying the work along so as not to have to wait for anything; for instance, if two impressions have to be taken for the same individual, take one and run it. The cast will be hardening while the second impression is being taken and run. The second will harden while the first is being taken from the impression, and an articulating plate fitted. When the articulation is taken run it and it will harden while the teeth are being selected.

Having ground and articulated the teeth, wax and invest one set. By the time the second set is waxed and invested the first will be ready to wash out and pack ; when this is done the second will be ready and may be washed out and packed while the first is heating preparatory to being closed ; while they are vulcanizing other work may be gone on with.

Much material may be wasted. It is an easy matter to mix twice as much plaster as is needed for an impression or investment. A case may be waxed much thicker and covering more space than is required for the plate, making a waste of rubber and time in finishing up. Much gold may be wasted in finishing gold plates, crowns or bridge-work. Often much more solder is used than is necessary for the strength or finish of the piece. In finishing gold work, if dry corundum or carborundum stones are used while grinding down the solder and the piece held over a paper or other receptacle, or if wet stones are preferred, or bowl containing water be used to wet the stone and wash off the piece occasionally, one will be surprised at the accumulation of grindings. The fine sand-paper or emery cloth used for rubbing down gold work and the strips and disks used in finishing gold fillings should be saved and burned and the ashes preserved. Sheet wax may be easily and economically made. Quite a saving of gas may be made by watching carefully the heaters and waxing burners. It is quite possible to make the gas bill what it need be. Great waste may be made in the careless mixing of cement and amalgam. One not infrequently sees more cement remaining upon the mixing slab, or more amalgam upon the bracket, after the operation than was used in the fillings themselves. All amalgam scrap should be saved, as it is easily refined and recut. Sweepings of the operating room and laboratory could profitably be kept, as they are readily bought by the refiners. I have heard of old carpets off operating rooms being sold for more than enough to purchase new ones. I have never been able to negotiate an exchange so favorably. Possibly because I have my carpet beaten twice a year ; but I have often intended having it rolled up and opened out upside down upon sheets and so beaten, to preserve the gold finished off fillings ; I feel that it would be a paying precaution. Rubber dam which has become too full of holes to make it safe to use, may be made as good as ever by patching the holes with a little of itself rubber cement. Towels used for protecting the patient's clothing are worn out more by laundering than by use. They may be used much longer without being laundered if, instead of wiping our instruments upon them while operating, we wipe them upon a mouth napkin, which answers every purpose and which costs relatively nothing. In the use of nerve broaches we may be extravagant. We may buy them at \$3 or less per gross, or we may pay

\$7 or \$8 for the same number. With care the one grade will answer about as well as the other. But whatever grade we use we may destroy many more than are necessary. In ordinary cases one broach will remove several nerves before the barks are stripped off, if it be only used for the removal of the nerves. As soon as it has done its work it should be cleansed and laid away for another time, and others which have lost their usefulness as extirpators may be used for washing out the canals, and when they have become so smooth as to refuse to hold a twist of cotton, they may have their points snipped off and be further used for nerve canal pluggers.

That pet ligature, floss silk, may be replaced by gilling twine, of which we may buy as much for 50c. as of the former for \$5. When using a ligature it is usually required upon three or more teeth. We are directed to prepare one for each and tie a knot to go on palatal or lingual side of the tooth to prevent the rubber from slipping off. Prepare one ligature; knot it if you wish, tie it on one tooth, cut off the ends close to the tooth, tie the ends together and proceed with as many teeth as it is necessary to ligate. It is profitable to purchase time-saving instruments and devices, but let us not buy everything that is offered for sale or we will find our laboratory and closet shelves loaded with rubbish only to turn up at house cleaning time. Thus by a little care and attention all the way along the line, and we have only taken time to mention a few representative points, we may make the expenses of the dental practice about one-half what it may be by carelessness and extravagance.

Correspondence.

THE MILD WAY.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—Are you not too severe upon the men in our ranks whom you stigmatize as quacks and quack-imitators? Is it not more in the spirit of Christianity to appeal touchingly and lovingly to these mistaken brethren, and try the influence of sympathising words of advice and lovingly counsel instead of severer words and measures? We have all got our faults, and all merit condemnation, and if we all received the punishment we deserve, few would escape. Now, it is best to enquire why these men do the things they should not do, and leave undone those things they should do, and approach them in a gentle and admonitory spirit, seeking their good, and urging them to depart from their evil ways. I am

not troubled with this class in my district, but if I were, I would try this way.

Yours truly,
J.—

[And you would not succeed: and you would not squeal until you found that the advertising liars were ruining your practice: then you would forget your own advice. Try your own propositions upon criminals. Appeal "touchingly and lovingly" to the next pickpocket you meet. Try "sympathizing words of advice and lovingly counsel" when you even want to collect your account from a dead-beat. Approach the next burglar you meet "in a gentle and admonitory spirit seeking his good, and urging him to depart from his evil ways." If you do not find that you'll have to fall back upon the terrors of law and jails, we will immortalize you in our pages as a new prophet. You can do the cooing and the wooing. As for us we will still pin faith to penalties, either ethical or legal. You admit that your convictions have not been tested. We have had thirty years' official experience. The quacks and quack-imitators of thirty years ago were not a circumstance for deliberate lying and imposture to their kin of to-day. In spite of generous efforts for reformation, the quack and quack-imitator will follow their instincts, as surely as the snake or the skunk. Penal laws against thieves are not meant for honest men, neither is the ostracism against quacks meant for respectable dentists.--ED. D. D. J.]

Question Drawer.

Edited by DR. R. E. SPARKS, M.D., D.D.S., L.D.S., Kingston, Ont.

Q. 32.—Tell a young dentist how always to get a correct bite.

A.—1. By an appliance invented by C. F. Garretson, consisting of a metal plate set to the chin before patient is instructed to bite and before articulating plate is inserted. The plate which is placed to the chin is adjusted by means of a set-screw thus by holding the plate lightly to the chin. The appliance being fastened by two thin metal bars which pass back to the ears, there being a rubber projection on each bar which fits into the ears. On one side a strap is fastened which is passed over the head and fastened to the opposite bar. After getting appliance in position and chin in its natural position insert articulating plate and request patient to close. The jaw cannot push forward without being uncomfortable to patient and displacing the appliance. (2) By instructing patient several times to put the jaw forward as far as possible and then to draw it back to its natural position. After a little practice the patient will understand what you want her to do. Then insert articulating plate and instruct patient to repeat what she had

previously been doing, and when drawn back ask patient to close, and in this way securing a correct bite.

C. P. SHERMAN, Kingston, Ont.

2. The method which I have found most successful is a few words of explanation to the patients previous to biting in the wax. Show them by your own jaw the different positions, and explain that the farthest back position is the one you want. Make them bite up several times before you put in the wax, to make sure that the position is right. Now, when they bite in the wax guide the lower jaw up; just the imprint of the cusps is sufficient; don't allow them to bite too hard as in doing so the lower jaw is apt to slide forward.

E. A. RANDALL, Truro, N.S.

Q. 33.—Give a recipe for a solution to relieve the after-pains of tooth extraction.

A.—I. Dr. T. B. Welch recommends the following:

R Alcohol (best).....	℥	i
Chloroform	℥	ii
Sulphuric ether.....	℥	vi
Gum camphor	℥	ss
Laudanum.....	℥	i
Oil of cloves.....	℥	ss

Sig.—Apply in socket on pledget of cotton.

2. A potent and reliable remedy for the immediate after-pains of extraction is amyl nitrite. The patient to inhale the preparation about three or four seconds and then remain quiet in the chair about five minutes or until the amyl nitrite has spent its primary force. A single drop of nitro glycerine, one % solution in half a glass of cold water is even better than amyl nitrite, and more lasting in its effects.—*Taken from Western Dental Journal.*

3. Dr. Thomas says for severe pains after extraction syringe socket well with hot water, which will relieve it almost immediately. Dr. Hays recommends adding a little tincture of aconite to the hot water and afterwards dress with campho-phenique.

R. E. SPARKS, Kingston, Ont.

QUESTIONS.

Q. 34.—We often notice on the lingual surface of the lower jaw, prominences opposite the roots of the bicuspid. Generally they appear as one on each side about the size of peas. I have seen them as large as beans. I have never seen them described in anatomy. Are they normal? If so, what are they called? If abnormal what are they, and what causes them?

Q. 35.—In cases of bridge work, where the bite is close and the dummy broad for occlusion, the gum becomes congested, filling up the space left for cleansing. This is particularly noticeable where a dummy is placed between two natural teeth. Can this be prevented? or is there any advantage in leaving a cleansing space where such is likely to occur?

Translations.

FROM GERMAN DENTAL JOURNALS.

By CARL E. KLOTZ, L. D. S., St. Catharines.

GUTTA-PERCHA used for filling is easily spoiled by keeping it in too warm a place. If kept in a solution of table salt it will keep for years.

HEARING RESTORED AFTER TWENTY-FIVE YEARS.—Bennet mentions a case in his practice where a lady, 50 years of age, who had been deaf for twenty-five years, had her hearing restored immediately after the extraction of a number of roots. Among these were the roots of the upper wisdom teeth, which were badly exostosed, and when extracted she felt as if relieved of a pressure which she had felt for a number of years.

AN ANTIDOTE FOR CARBOLIC ACID.—Carelton recommends vinegar. When vinegar is applied to the skin or mucous membrane cauterized with carbolic acid, it will turn the white spots formed on the skin by the acid to the natural color and prevent the formation of a scab. When taken internally it neutralizes the carbolic acid in the stomach, for which reason persons poisoned with carbolic acid are given diluted vinegar to drink before the stomach pump is applied.

ADHÆSOL is a substitute for collodion, over which it has the advantage of being a better antiseptic. This preparation is a clear amber-colored liquid, with a pleasant odor, and is neither toxic nor caustic. It dries in a few seconds on the skin, and is an adherent covering to the mucous membrane. It is prepared as follows: Macerate, Resina Kopae, 350 gm.; Benzœ and Balsam Tulu aa, 30 gm., with a mixture of Ether, 1000 gm.; Al Thymi, 20 gm. for two days, filter and add a-nophthol, 3 gm.

TO NARCOTIZE THROUGH THE EAR.—Dr. Huppe, V.S., wishing to perform an operation on a large dog, and not having sufficient assistance to anæsthetize in the usual way, he injected 10 gm. sulph. ether into the ear of the dog. The effect was instantaneous; the dog shook his head and sat down. A few minutes later he

was perfectly helpless, and the operation could be performed with out any difficulty. Since then Dr. Huppe has frequently anæsthetized horses, for which he injected 30 gm. sulph. ether.

TOOTHACHE REMEDY.—Calmus root has been recommended as a preventative and palliative remedy for toothache. Cut the roots into small pieces, put into a bottle and cover with best spirits. Cork and let it stand for 2 to 3 days, then add sufficient water so that the solution will only cause a slight prickling sensation on the jaws. Gargle in the morning, at noon (after meal) and in the evening before retiring. This will relieve toothache, and forms at the same time a preservative of healthy teeth. It will somewhat arrest decay.

INHALATION OF AIR IN COMBINATION WITH NITROUS OXIDE.—Formerly it was considered a mistake to allow the patient to inhale air with N_2O , but now it is looked upon as an improvement. Dr. Braine has a simple arrangement attached to the inhaler whereby he can regulate the admixture of the air. The patient is allowed to inhale the pure gas first, then by turning a screw on the inhaler, air is admitted. Anæsthesia lasts longer and is not accompanied with excitant twitching of the muscles. Nausea or vomiting has never occurred.—*Monatsochrift fur Zahnheilkunde.*

PEARSON'S LOCAL ANÆSTHETIC is composed of the following :

Chloroform	12
Tinct. Aconite.....	12
“ Capsici	4
“ Pyrethri	2
Ol. Caryophylli	2
Camphor	2

The camphor is dissolved in the chloroform, the Ol. Caryophylli added, and then the tinctures.—*Zahuarztliches Wochenblatt.*

DISCOLORING OF A CENTRAL INCISOR WITH LIVING PULP. (By J. H. Braddock.)—In examining the teeth of a healthy young man I noticed a remarkable discoloring of the left upper incisor, which otherwise appeared to be sound. I questioned the patient if he had met with an accident with this tooth ; he said that about ten months ago, in playing football he was hit on it and knocked inward, partly dislocating it, he immediately pressed it out again into its proper position, and, with the exception of the discoloration, has had no inconvenience from it since. The discoloring was most conspicuous on the cutting edge. I took it for granted that the pulp was dead, and drilled into it for the purpose of removing the decomposed matter, to prevent further complications, but to my astonishment I found the pulp alive. I was now compelled to destroy the pulp, and after this was done I had great

difficulty to remove the remains from the canal, as a quantity of secondary dentine had formed in the upper part of the pulp cavity, the lower part of the canal remaining free of it. According to my judgment, the pulp was injured by the blow the tooth received, and through irritation ecchymosis followed, after which secondary dentine was formed. This case is interesting, inasmuch as it shows that discoloring of a tooth is not always a symptom of a dying or a dead pulp.

NEW METHOD OF ADMINISTERING CHLOROFORM.—Dr. Rosenberg asserts that the disturbances of the action of the heart and of respiration in administering chloroform, and also with other anæsthetics, is caused by irritation of the nerve branches of the pituitary mucous membrane, and attempts have been made to prevent this by benumbing the membrane with cocaine. After a test of fifty cases Dr. R. gives the following advantages of this method : 1. The first stage of anæsthesia is less unpleasant, and the patient never struggles against inhaling the chloroform. 2. The stage of excitement rarely occurs, and when it does it is very slight, except in the case of hard drinkers. 3. Only in a very few cases does vomiting occur, and then preceded by only slight nausea. 4. After recovery no unpleasant sensation is experienced. The cocaine is applied as follows : The patient is directed to blow the nose so as to thoroughly free it of mucus. Then he is placed into a sitting position, rather leaning forwards (never in a lying position) and made to snuff one centigramme of powder composed of a mixture of 10 per cent. hydrochlorate cocaine with an indifferent powder. After about three minutes repeat, and immediately commence the chloroform.—*Correspondenz Blatt*.

[I have used a cocaine spray in the nose for the same purpose.—C. E. KLOTZ.]

Abstracts.

Edited by G. S. MARTIN, D.D.S., L.D.S., Toronto Junction.

THE proper way to prevent plaster falling into the throat when taking plaster impressions, is to have it the right consistency and avoid putting too much on the tray.

FOR cementing on bands and crowns, dry the tooth and paint with shellac varnish before applying the cement. This will be found to give durable adhesion. Should the cement dissolve, the shellac will still protect the tooth and there will be no decay under the band. To retain regulating appliances, add a very little powdered pumice to the varnish.—*W. G. Lange, in Cosmos*.

KEEPING the points of contact away from the union of filling and enamel, and the thorough bevelling of all edges constitute, in my opinion, the most important of precautions in cavity preparation.—*F. Schumacher, Stomatological Gazette.*

AFTER-PAINS OF EXTRACTION.—A single drop of nitro-glycerine—one per cent. solution—in half a glass of cold water is potent and reliable, and lasting in its effects. It is also a marvelous benefit in neuralgia and for the bad headaches following dental operations.—*Ed. H. Bowne, in Items of Interest.*

YOU CAN TAKE YOUR CHOICE.—To the question, "Is sensitive dentine an abnormal condition?" the following answers are found in the *Review*: Nays: Dr. Cravens, of Indianapolis; Dr. Guilford, of Philadelphia; Dr. Darby, of Philadelphia. Yeas: Dr. Abbott, of New York; Dr. Andrews, of Cambridge; Dr. Barrett, of Buffalo.

ONE very weak point in crowning is the almost universal use of zinc phosphate for the cementing material. Gutta-percha is so much more reliable and durable as a cement, besides allowing the crowns to be removed upon the application of heat whenever necessary, that it seems strange more operators do not use it in preference to the phosphate cements.—*S. E. Davenport, D.D.S., M.D.S., New York, in Dental Digest.*

WHAT SHOULD BE THE ATTRIBUTES OF THE IDEAL FILLING?—I will enumerate them: 1. Easy to mix; 2. Easy to introduce; 3. Adhesive to walls; 4. Sufficiently plastic; 5. Sufficiently quick setting; 6. Resistance to attrition; 7. Good edge strength; 8. Non-shrinking; 9. Non-expanding; 10. Non-irritating; 11. Non-conducting; 12. Tooth color; 13. Enamel finish; 14. Insoluble.—*J. Foster Flaggs, D.D.S., Philadelphia, Pa., Items of Interest.*

WHILE in Canada the matriculation which gained entrance for the speaker to the R.C.P.S. in Ontario a short time ago, a college whose curriculum covers a period of five years, and whose graduates are not inferior to those of the best institutions of London and Edinburgh, would to-day deny him entrance to the leading school of dentistry in the same Province. I think these improvements are along the right line—the more intellectual the men found in a profession, the better for that profession. The proper time to develop and train the intellect is before the study of a profession is entered upon. It is to the credit of dentistry, which fifty years ago had not a college graduate, that nearly seven per cent. of her recent graduates are possessed of degrees in the arts and science, and over fifty per cent. hold diplomas of high schools and academies.—*Dr. C. H. Nicholson in Dental Practitioner.*

LEFT CUTTING BURS.—Dr. C. Witthaus, of Rotterdam, advocates the use of left cutting burs as well as the ordinary right cutting, as being necessary to the proper preparation of cavities and root ends. The enamel margins cannot be prepared properly by the right cutting burs, because the burs will jump the margin and mutilate it. The jumping of the bur into the gums can be avoided by having both the right and left cutting burs and using each in its proper place.—*Ash's Quarterly*.

SET CROWNS AND BRIDGES WITH GUTTA-PERCHA.—I set a great many of my bridges and nearly all of my single crowns with gutta-percha. I use Doherty's white base-plate gutta-percha; put that around the pin and around inside the band. This is forced into place while the root is moist so that it can readily be withdrawn and the surplus trimmed away. Then, after preparing the root, dry it and clean it thoroughly, put in a little chloro-percha and set your crown in place. If you have a bridge you can set it equally well.—*Dr. Belyea, International*.

EXCERPTS on treatment of pyorrhœa, found in the *Dental Digest*: Dr. J. A. Freeman, "Do not be in a hurry; give plenty of time for thoroughness." Dr. F. R. Ross, "We must remember that we are working on human tissue, and that the operation is very painful." Dr. G. V. Black, "Practice handling of instruments and where to place them to remove deposits." Dr. Garrett Newkirk, "I would add emphasis to the sterilization of instruments." Dr. E. K. Carpenter, "There is one point—the necessity of working upon one tooth at a time." Dr. E. Mawhinney, "Use a two per cent. solution of trichloracetic acid before operating." Dr. C. P. Prayn, "It is impossible to do much without education of patients."

PULP DEVITALIZATION IN THE TEETH OF CHILDREN.—One of our great difficulties in dealing with the teeth of children is the devitalization of the pulp when indicated. I have used, and with much success for this purpose, a paste of powdered cantharides and carbolic acid; say about one-twentieth grain of the powder with enough carbolic acid or creosote to make a paste. I know that the use of arsenic for this purpose is justly viewed with suspicion, but my opinion is that it is largely a question of how much arsenic is used. I use arsenic for this purpose in very minute quantities and have had no ill results. The canals of children's teeth should, of course, be cleansed thoroughly and sterilized. I question the use of cotton dressing in these cases, for should the foramen be large, owing to a partial resorption of roots, soft tissues might be impinged upon, and the cotton becomes a source of irritation or worse. I think the safer practice is to use fluid in the canals and oxychloride in the pulp chamber.—*Dr. Darby, International*.

BEFORE the Odontological Society of Western Pennsylvania, Dr. W. A. Lee, Alleghany, Pa., described his method of capping exposed or nearly exposed pulps. The ideal pulp cap should be a disinfectant, an antiseptic and antiphlogistic, and most important of all, a non-conductor of thermal changes. It should fit closely and accurately the surface to be covered, and be firm and unyielding. As a disinfectant nothing is better than pure beechwood creasote. As an antiseptic and antiphlogistic, iodoform has proven best. As a non-conductor gum copal dissolved in sulphuric ether. After removing decay and softened dentine, being careful not to wound pulp, the cavity is saturated with creasote and wiped dry. Iodoform is then introduced, followed by the copal ether varnish a little thicker than cream, dried with warm air blasts. A number of coats may be applied until the tooth is not sensitive to cold air blasts. If exposure is large apply a piece of asbestos paper to the varnish before it is dried, revarnishing over the paper. A thin paste of oxyphosphate should be applied over the cap and allowed to harden thoroughly before any filling is attempted.—*Ohio Dental, April.*

METAL pins for use in the roots of pulpless teeth as anchorage posts may be made of platinum alloyed with iridium, gold alloyed with platinum, or of stiff German silver wire, the latter being, of course, much less expensive but not quite as reliable for the demands in all respects as the two first named. This wire in several different sizes (say Nos. 3 to 7 of bur-gauge) should always be at hand, and before being used a shallow screw-thread should be cut upon it merely for the purpose of giving proper hold to whatever plastic material may be used in connection with it. The writer prefers to select a screw a trifle smaller than the calibre of the prepared root-canal, and cement it in place with zinc phosphate, rather than use a screw slightly larger than the canal, depending upon the thread cut in the dentine by screwing it in as some operators do. What has been said above against the use of zinc phosphate refers, of course, only to its use in locations reached by the saliva. Stiff German silver is not as rigid as the other wires referred to, but will always answer if two roots can be utilized, a pin being placed in each. It is not affected by mercury, nor is ordinary clasp metal—gold and platinum—by the proportions of mercury in amalgam, though pure mercury will sometimes affect it slightly. Stiff German silver has been referred to because there are two varieties of the metal obtainable. The largest round bur used in preparing the root-canal for the reception of the metal pin should be measured in the bur-gauge, and a pin just one size smaller selected for use.—*S. E. Davenport, D.D.S., M.D.S., New York International Dental Journal.*

TARDY ERUPTION.—In 1893 I extracted the six anterior superior teeth for Mrs. C—, of Weston, and inserted an artificial substitute. In May, 1897, the lady called on me and complained that I had left a root of one of the teeth. On examination I found at the median line the point of an erupting tooth coming down so as to throw the artificial denture out of place. It was with some difficulty extracted and proved to be a fully developed cuspid lying in a slanting direction from canine eminence to median line, and having the apical third curved almost at a right angle to the body of the tooth. The lady is over fifty years old.—*G. S. Martin.*

ANÆSTHETIZING OF PULP FOR IMMEDIATE REMOVAL BY CATAPHORESIS. (Dr. W. W. Moorhead, Aledo, Ill.).—The method for treating such a case is as follows: The rubber dam being adjusted, the cavity washed out, and sterilized, place a pellet of cotton saturated (but without a surplus, to run around the teeth), with the following medicament in the cavity:

Cocaine	18	gr.
Aconitine	0.1	gr.
Thymol solution, q. s	3	i

To this apply the positive current, turn on fifteen or eighteen volts, and should this not be sufficient to reach the apex make a second application, and remove the pulp immediately.—*The Ohio Dental Journal.*

STERILIZING PUTRID CONTENTS OF PULP CANALS.—Dr. C. H. Rosenthal, of Cincinnati, sterilizes putrid pulp canals by electro decomposition. At a clinic before the Chicago Dental Society recently his method was producing nascent chlorine and driving the same through the pulp canal from positive to negative by osmosis. This was done by placing a saturated solution of sodium chloride on a piece of cotton and attached to the positive pole, which, upon contact eliminated large quantities of free chlorine. The antiseptic qualities of the chlorine, together with the decomposing effect of the galvanic current, he claimed, renders these septic pulp-canals perfectly aseptic and ready for immediate root filling, before removing the rubber dam, claiming it advantageous to do so to obviate the possibility of regenerating the pulp-canal by contact with the saliva, which contains ever-present germs. The canals were filled in the following manner: A piece of orange-wood was whittled down to the size of the pulp-canal, the wood then saturated with a double strength tincture of iodine, and a paste of iodoform and glycerine was then placed on the stick and carried to the pulp-canal and applied with a churning motion; the stick was broken off and left in the pulp-canal, the tooth was then ready for filling.—*Pacific Stomatological Gazette.*

A METHOD FOR TREATING ROOTS OF BADLY DECAYED TEETH.—Dr. J. Austin Dunn, Chicago, gave a clinic before the Chicago Dental Society to show his method of procedure in cases where the tooth is too badly decayed to allow the application of the rubber dam with ease. The cavity is excavated without the dam, flushed with medicaments, the entrance to the canals found and opened, then having at hand small wooden pegs or copper points, the alcohol lamp and Gilbert's temporary stopping, the rubber dam is applied and held down, forcing back dam and gum with a hand matrix. After drying the cavity the pegs are then inserted in the entrance to the canals, and the cavity filled with the stopping, packing it around the pegs. The matrix and points can then be withdrawn, leaving a simple means of access to the canals, and the dam may readily be applied at any time for treatment of the roots. In case a tooth is so decayed that the dam cannot be applied, Dr. Dunn prepares the cavity thoroughly, fills permanently with amalgam around the pegs inserted in the canals. These may be withdrawn before or after the amalgam hardens. In case a tooth is to be crowned, but is too much decayed to allow application of the dam, the root may be prepared and the gold band fitted to the tooth at once, and driven to place. This will permit the use of the rubber dam for necessary thorough treatment.—*Abstract of description in Dental Review.*

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

TEETH IN RELATION TO THE EAR, NOSE AND THROAT.—Gambati called attention to the importance of not neglecting the teeth in diseases in general, and especially in those of the ear, nose and throat. Disease may affect the development and formation of the teeth. The reverse is also true, a carious tooth or alveolar abscess may develop symptoms that are thought to depend, by the patient, on trouble in the ear, nose and throat. The ear especially is frequently the seat of reflex disturbance that originate from the teeth, although the nose and throat are also sometimes affected in this manner.—*Laryngoscope*, March, 1897.

BLOOD POISONING AFTER TOOTH EXTRACTION.—Dr. Port, of Munich, remarks that, "when we consider the large quantity of micro-organisms which flourish in the mouth, it is extraordinary that dental extractions are not more frequently a source of infection." Dr. Miller's book cites only sixty cases, of which about half the number terminated fatally, while the other half recovered

sooner or later. Death generally occurred from septicemia, pyemia or meningitis. He gives a recent case of a young and vigorous man whose lower molar had been extracted by means of the key. He developed fever and died in four days. The autopsy revealed a large abscess in the neck, the pleural cavities held a large quantity of fetid brown pus, while the pericardium also contained pus. The abscess disclosed streptococci and diplococci, and the latter resembled the salivary septicemic microbe described by Miller.—*Journal of Brit. Dent. Assoc.*

AN INTERESTING CASE OF MEMBRANOUS STOMATITIS.—A case of rather exceptional interest was recorded by Mr. Stanley Colyer, at a recent meeting of the students' Society of the Dental Hospital of London. The patient, a man aged about twenty, had been sent to the Western Fever Hospital, suffering from supposed diphtheria. The membrane was not symmetrical, but was confined entirely to the left side of the mouth, covering the hinder portion of the left border of the tongue, the gum around the lower molar teeth, and the tonsil. The case being unusual, careful bacteriological examinations were made, but in no instance was the Klebs-Loeffler bacillus found. After the patient had been in hospital one or two days it was discovered that he had an abscess in connection with one of his lower molars. The offending tooth was removed, and from that time the membrane began to clear up, and soon disappeared.—*Journal of Brit. Dent. Assoc.*

APHTHA CACHECTICA OR RIGIA'S DISEASE (1881).—According to Prof. F. Fede (*Arch. f. Kinderheilkunde*, Vol. XXI. 5 and 6, 1897) this disease is often met with in the lower regions of Italy, especially in the Province Sannio. It manifests itself as an elevated, gray, pearl-like swelling, 2 cm. wide and $\frac{1}{2}$ cm. thick, always underneath the tongue and on its frenulum. Judging from the fact that the tumor appears, as a rule, after—very rarely before—the eruption of the middle incisors, the author is inclined to attribute it to the friction of the teeth against their alveoli during cutting. He distinguishes three types of the affection: 1. Sub-lingual tumor without complications. 2. Tumor accompanied by general malaise, disturbance of the alimentary canal, cachexia; sometimes, also, tuberculosis. 3. Tumor attended by severe complications, leading finally to death of the child. The histological structure of the tumor is alike in all three types, presenting a hypertrophy and hyperplasia of the mucous membrane, especially of the papillary layer. Old tumors assume the structure of a granuloma. No micro-organisms can be found in stained sections and inoculation experiments prove negative also. The treatment consists in excision of the tumor with consequent cauterization. Complications must be met as they arise.—*Amer. Med. Sug. Bull.*

THE MICRO-ORGANISM OF SCORBUTUS.—Testi and Bebi, in the *Arch. Ital. di clin. Med.*, ref. in the *Centbl. f. inn. Med.*, 1896, No. 19, p. 503, assert that scorbutus is an infectious disease, and that they have found the micro-organism. With sterilized instruments they removed from the characteristic foci upon the gums small portions of the mucous membrane. These were triturated in a mortar with sterilized, freshly boiled water, and then drops of this fluid were employed for cultures upon gelatin, agar and glycerin-agar. The authors claim to have constantly found a diplococcus, which in some of its features resembles the *Staphylococcus pyogenes aureus*, and which, for this reason, may have heretofore been overlooked. It is said to differ from the *pyogenes aureus* in that this coccus never gave rise to septicemic infection in rabbits and guinea-pigs, but only to hæmorrhages of the skin, mucous membranes and serous membranes. With this organism the authors were able to induce regularly in animals scorbutus-like hæmorrhages. They never observed these microbes in the blood of man or experiment animals. According to them, scorbutus is not a bacteriemia, but a toxemia. The toxic products are taken up from the gums into the circulation, and in this manner produce the characteristic scorbutic dyscrasia. The fact that scorbutic phenomena can be produced by the blood of infected animals as well as with sterile cultures, is looked upon by the authors as proof of this assumption. The microbe of scorbutus described by Babes, the authors believe, is a bacillus of hæmorrhagic septicemia,—*Amer. Med. Surg. Bull.*

MR. J. E. GEMMILL, in London *Dental Record*, June, in an article on the relationship of medicine to dentistry, draws attention to the neglect of the teeth by medical men, as well as to the common ignorance of many dentists in mistaking all affections of the teeth as primarily and wholly due to pathological changes in the teeth themselves. 'Mr. Gemmill divides his subject into three parts. 1. As to the direct effect of disease and constitution on the teeth. 2. The effect on the economy of want of teeth and dental caries. 3. The direct reflex effects from irritation of the fifth nerve and its connections. The author alludes to various effects of ill-health on the teeth, which, he thinks, are due entirely to constitutional causes evidently unaware of the local manifestations with which most dentists are familiar; and expresses his surprise that Tomes should state, "that caries is an effect of external causes in which so-called vital forces play no part." Mr. Gemmill evidently is many years behind the times in this respect, due, no doubt, to the fact that he is not a dentist. Referring to neuralgic affections of the face, arising from the teeth he remarks: "These conditions are so well understood, that the first thing a physician does is to ask the patient, 'Have you any bad teeth?' and getting a negative answer, he proceeds to

treat the neuralgia, and if it yields readily, then he presumes it is not from the teeth. But there are numbers of cases which I am sure you, in dental practice see daily of neuralgia, from a curved wisdom tooth, or decayed stump lying under the gum, which only the trained dental surgeon can diagnose ; and I would like medical men to recognise this fact and have a dentist's opinion on the mouth early and so save much suffering." The author cites many cases of reflex nervous affections ; wry-neck, epilepsy, paralysis of arm ; blindness, deafness, etc., directly due to pathological conditions of the teeth, and concludes as follows : "The more widely the medical profession recognises the dental practitioner as a brother practitioner, practising a special branch of medicine, the better will it be for the patients entrusting themselves to him."

AT the May meeting of the Odontological Society of Great Britain Mr. Baldwin read notes on a case of unerupted maxillary third molar causing inflammation in the substance of the cheek simulating epithelioma. The lesion was on the cheek inside the mouth, and presented all the appearances of epithelioma. A surgeon had sent the patient to the dentist to examine the mouth for any local cause of the trouble. The cheek in the centre, over a space as big as a crown piece was hard throughout. The external skin was bound down, immobile and slightly red ; mucous membrane inside was hard, modular and fissured ; one large central fissure was raw-looking, granular, and broad everted edges, and the induration of the whole was gristly and characteristic of epithelioma. From this mass could be felt an ill-defined infiltration extending upwards and connecting it with the maxillary bone. Appearances were exactly those of epithelioma, but upon following grounds Mr. Baldwin cherished the hope that the real condition was not such : 1. He had the patient under observation about three months before ; had then noticed nothing unusual about the mouth, whereas now there was what looked like an epithelioma of many months' standing ; 2. That the history of the lesion did not tally with that of epithelioma, in that the first symptoms had been severe pain and immense swelling of the side of the face, the onset of which had been only about a fortnight before ; 3. That there were no lymphatic glands to be felt in the submaxillary region. A local medical practitioner had treated the swelling by twice opening into it with a lancet from inside the mouth in centre of cheek, but no pus had been found. The incisions accounted for the deep fissures in centre of the mass when first seen, but not for the fact that the fissure was still unhealed and presented raw and granular surfaces and edges which were indurated and everted. A fortnight later, the surgeon asked Mr. Baldwin to assist him in an examination under an anæsthetic, when the cheek was found distinctly better ; parts more

mobile, the track of induration extending upwards towards the maxilla was less easy to be felt ; the mass itself was smaller and softer. Attention was drawn to what appeared to be a small stump, just showing as a tiny point of the extreme back of the maxillary process on the left side. On examining this with a pointed probe, the characteristic feeling of enamel was at once recognized, and a buried third molar diagnosed, which was extracted. In two days' time the improvement was very marked, and in course of a few weeks all the appearances suggestive of epithelioma had vanished. The existence of the focus of inflammation in the centre of the cheek, while the cause lay high up in the maxilla, is explained by the deflection of the inflammation downwards and outwards from the root of the tooth of the attachment and the buccinator muscle to the maxilla. The root of this tooth was well above this attachment, and the products of inflammation travelled down into the cheek from the root of the tooth by the course indicated, and then to have occasioned acute inflammation in the centre of the cheek. The case is of great interest as showing the completeness with which a simple inflammation sometimes may simulate epithelioma, and as exemplifying the advantage which a correct diagnosis may in such a case entail. Mr. Stover Bennett remarked that unfortunately it was not always the case that dental surgeons were called in to give the aid of their expert judgment. In many cases they might render very great assistance. The usual course of procedure in such a case would have been to have diagnosed it as one of epithelioma and the patient's friends would have received the terrible news and some severe operation would have been resorted to. The result would have been that when the operation was in progress, the error of diagnosis would be recognized, but then matters to a great extent would be too late.—*Proceeding of Odontological Society of Great Britain.*

Proceedings of Dental Societies.

EASTERN ONTARIO DENTAL ASSOCIATION.

The eighteenth annual meeting of the Eastern Ontario Dental Association was held in the parlor of the Rossmore Hotel, Cornwall, Tuesday and Wednesday, July 6th and 7th, 1897. The President, Dr. Ira Bower, in the chair.

The following members were present : Drs. Ira Bower, J. C. Bower, Geo. Hutchison, W. R. Green, S. S. Davidson, G. E. Hanna, Ottawa ; Dr. A. H. Weagant, Smith's Falls ; Drs. R. E. Sparks, J. H. Clark, D. A. Black, Kingston ; Drs. D. V. Beacock, W. Brace, Brockville ; Dr. V. H. Lyon, Ottawa ; Dr. H. B. Weagant, Morris-

burg; Dr. E. R. Howes, Vankleek Hill; Drs. W. B. Cavanagh, J. A. Liddell, Geo. H. Weagant, Cornwall.

The following Dentists were admitted to membership: Drs. G. Emmett, Morrisburg; W. McGill, Dixen; W. D. Knight, Cornwall.

The Treasurer's report showed a surplus.

The following were elected officers for the ensuing year: President, A. H. Weagant, Smith's Falls; Vice-President, D. A. Black, Kingston; Secretary-Treasurer, Geo. H. Weagant, Cornwall.

Dr. V. H. Lyon read a very interesting paper entitled "Elements of Dentistry." (See page 240.)

The discussion was opened by Dr. Sparks, who was highly delighted to hear such a paper from one of the younger members of the profession. He admired the paper immensely. It was a matter of congratulation that the rising members of the profession should have the advantages they enjoy at present. When he (Dr. S.) began the study of dentistry he was obliged to go outside the country to obtain his instruction. Speaking of the new College, he said that some dentists had made the remark that it was a detriment to the profession, inasmuch as it would lead to overcrowding. The paper shows that we should have a broader view.

Dr. Hanna said that in reference to the reading room in connection with the college he might say they already had a good reading room, well patronized by students, and also the nucleus for a first-class dental library. As to the gymnasium, the building and equipment of one was had in contemplation. Regarding the morals of the profession, his idea was that our profession was more free from immorality—especially intemperance—than any of the other professions.

A letter from Dr. C. A. Martin, Ottawa, was read by Dr. S. S. Davidson. (See page 239.)

Dr. Green had a "question box" to submit for discussion.

The following were some of the questions: 1. "Can anything be done, by systematic treatment or otherwise, to improve the quality of the teeth of the rising generation?" 2. "What do you consider the best and quickest method of reducing facial swelling?" 3. "Are metal clasps preferable to vulcanite, where clasps are necessary?" 4. "How would you proceed to fill devitalized temporary teeth?" 5. "In removing the pulp of a tooth that has been treated with arsenic, we frequently find a small remnant of the nerve extremely sensitive. How can we remove this with the least pain to the patient?"

To the first question Dr. Hanna said the quality of the teeth of the rising generation might be improved if we could return to the conditions of life previous to the beginning of tooth caries. This, he admitted, was hardly practicable.

Dr. Howes believes there are many things which can be done to improve the quality of the teeth, if we could only induce the patients to follow our instructions. There is the difficulty.

Dr. G. Weagant said that Dr. J. G. Adams, of Toronto, in his paper which would be read to-morrow, would likely point out the only practical solution of this problem.

In answer to the second question, Dr. S. S. Davidson gave the following method: Open cavity in tooth and excavate. Open pulp chamber and thoroughly clean canals, using creosote as a dressing. Then give the following internally:

℞ Dovers powder.
 Potass. Nit..... ā ā 2 grs.

Sig. Take at bed-time, followed by purgative in the morning, such as:

℞ Magnesia Sulph 3 drams.
 Pot. Bi. Tart..... 2 drams.
 Aqua Menth. pip..... 2 ozs.

Sig. Take in water upon arising. This treatment he has found very effective, rarely requiring any external applications.

Dr. V. H. Lyon gave the following as his method: Free vent to the matter; administration of saline purgatives and external applications frequently, if swelling is great, of hot, strong solutions of acetate of lead, if swelling not very marked then apply continuously, ice and compressions.

The third question as to clasps brought Dr. Sparks to his feet. Dr. Sparks says, "I do not use clasps as much as I used to. I always preferred metal, and considered that the better the clasp fits the contour of the tooth the less injurious. I found cases, however, where the teeth decayed rapidly under well contoured clasps made of gold. I heard Dr. Bonwill, of Philadelphia, say he did not want a clasp to fit the contour of a tooth—that he considered a flat band clasp preferable—that the less surface in contact with the tooth the better. I heard Dr. Land, of Detroit, declare that he would not clasp a tooth unless he could first cap it."

Dr. A. H. Weagant prefers the metal clasp, as he usually finds rubber clasps clumsy and unsightly.

Dr. Howes spoke of clasps causing teeth to decay, especially when made of rubber. This he thinks due to uncleanness.

Dr. G. Weagant prefers metal clasps made of wire formed in the shape of a loop. In this way very little of the tooth is covered, consequently more cleanly.

The next question in reference to filling devitalized temporary teeth, was very thoroughly discussed by a number of the members present, and it was decided that it is best to proceed very much in the same way as with adult teeth.

In answer to the fifth question Dr. J. C. Bower said that after the pulp portion is removed and you find the remaining branches sensitive, carry with a specially prepared probe—one made from piano wire, reduced to a very fine tapering point—made so by filing and afterwards polished very smooth with fine sandpaper, a preparation of the following formula :

Alcohol	1 oz.
Acid tannic	1 oz.
Creosote	2 drams.

Good results will be found almost immediately after it is applied. It can be worked up the canals without much pain to the patient. If one or two treatments should fail, examine the point of treating instrument and see if it is very sharp and fine ; pass it heroically to the end of canal. If this be done in a quick movement, very little pain will be experienced.

Dr. Ira Bower read the retiring president's address.

Brockville was chosen as the next place of meeting, and the meeting was adjourned until next morning at eight o'clock.

The meeting opened at 9 p.m., July 7th, when the newly-elected officers were duly installed, Dr. A. H. Weagant assuming the chair.

Dr. Hanna brought in his report of the transactions of the R.C.D.S. during the last year.

It was moved that a vote of thanks be tendered Dr. Hanna for his able report, and the careful manner in which he has looked after our interests at the board.

Dr. D. V. Beacock read an interesting and able paper entitled : "Think for Yourself."

In the afternoon the members of the convention were entertained by the local dentists to a trolley ride through the town and to the St. Lawrence Park, where they carried on their proceedings in the Pavilion. Invitations had been issued to a number of citizens interested in educational matters to hear a paper on "The Systematic Examination of School Children's Teeth," by Dr. J. G. Adams, of Toronto. Several availed themselves of the opportunity, and all who did so were much impressed with the importance of a matter which had previously almost entirely escaped their attention.

AN IMPORTANT SUBJECT.

Dr. Adams gave some interesting information, the result of twenty-five years' special attention to the care of children's teeth. He has devoted much of his time and considerable money to provide the poor of the city of Toronto with dental attendance, having established a dental hospital for the children of the poor, and also induced some of his fellow-practitioners in the city to undertake the examination of the teeth of very poor families free of

charge. He said he had examined the teeth of thousands of children himself, and found that an exceedingly small percentage had as good a set of teeth as the average man of fifty years of age had to-day. The teeth of the present generation were not nearly so good as those of the preceding one. This deterioration could only be arrested by compulsory examination of the teeth of school children and prompt attention to the first appearance of decay. He described the danger of the transmission of terrible diseases through the use of a common drinking cup in the Public Schools. The mouths of many children of even well-to-do people were frequently found in a most disgusting state from lack of proper attention to the teeth. It was to the foul gases emitted from such that much of the sickness of children was attributable. The school rooms were turned into pest holes, and no one suspected the cause. The trouble was not by any means confined to the children of the poor. Those who could well afford to have their children's teeth attended to were in many cases quite ignorant on this point. In many cases teeth were allowed to decay in the belief that they were only first teeth and would be replaced by others. There was too much ignorance on this subject. Even physicians were often astray in this connection. He quoted several instances of intense suffering caused by the wrong treatment of ulcerated teeth. England was waking up to the importance of this matter, and several dental hospitals had been established in that country. By taking the trouble in time the teeth could be kept in good condition at trifling cost. It was delay that necessitated an expensive remedy. His proposition was that a Dental Health Officer be appointed for every school, to make a thorough examination of the teeth of all the children—except such as presented certificates from their family dentist—and where any treatment was necessary to send a report to the parents of the child requiring it. It would be necessary to have dental hospitals in the cities, where the work could be done for the poorer classes at a cheap rate. In small towns and villages the dental inspector could possibly be arranged with to do this work in addition to making the examination. The examination need not interfere with the work of the school. He had examined the mouths of as many as one hundred and fifty children in one hour. He pointed out the many benefits that would follow the proper care of the teeth of the rising generation, and said his suggestion had received the endorsement of the Toronto Board of Health, the principals of the Toronto Public Schools and a host of others.

Dr. Adams was warmly applauded on resuming his seat.

Dr. Weagant, the president, heartily endorsed Dr. Adams' views and said it would be well if parents could be enabled to read the excellent advice he had offered.

Dr. Sparks also spoke highly of the service rendered to the Convention by Dr. Adams, and suggested that a dental department should be added to general hospitals.

Dr. Adams said it might be found to work. He thought the ladies might take up this matter.

Dr. Beacock said the suggestions offered by Dr. Adams were most valuable. His description of the danger resulting from carelessness in regard to children's teeth was not a bit overdrawn.

Dr. Hanna recognized the necessity for the systematic inspection, but thought it could only be secured through legislative action making it compulsory.

Dr. Ira Bower strongly endorsed Dr. Adams' views.

Dr. Alguire, one of the leading physicians of Cornwall, was invited to speak, and complimented Dr. Adams on the good work he is doing. He was aware of the great deterioration of the teeth of the present generation, and if they did not do something to stop it they would soon become practically toothless. He thought it was of the greatest importance that the rising generation should be educated to see the necessity of taking the precautions suggested by Dr. Adams.

Dr. Graveley, another leading medical practitioner of the town, endorsed Dr. Alguire's remarks. He thought Dr. Adams' suggestions were most valuable.

Mr. D. Monroe, secretary of the Public School Board, and Mr. Gibbens, of the *Standard*, followed on the same lines, expressing regret that Dr. Adams' paper had not been heard by all the people of the town who have children at school.

Dr. J. C. Bower and Dr. Cavanagh also spoke briefly of the value of the suggestions made.

Dr. Hanna said they should endeavor to secure the endorsement of the Ontario Board of Health. If they could do this the dental and medical profession would do the rest. He concluded by moving a vote of thanks to Dr. Adams for his address, making a graceful acknowledgment of the valuable service he has rendered in connection with the subject under discussion in the past twenty-five years.

The motion was seconded by Dr. Beacock and carried by a standing vote.

The company then partook of refreshments, on the invitation of the Cornwall members of the profession, after which Dr. R. E. Sparks, of Kingston, read an interesting paper on "Economy in the Dental Office."

The business of the convention was then brought to a close; the discussion of Dr. Sparks' paper being laid over till next year.

Dominion Dental Journal

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VOL. IX.

JULY, 1897.

NO. 7.

TALL WRITING.

Many readers of our journals will never forget, and to use a Hibernicism, most of them will never remember, the word-coining and bewildering language used by the worthy and wise Dr. W. H. Atkinson. He has had feeble imitators, who could be tolerated if they had half his genius; and even when some of them have something to say worth saying, they struggle to wrap their thoughts in such obscure language, that they might as well talk Syriac. In one of our American exchanges we find such a lot of nonsensical rot of this sort, that one would want the patience of Job, and the prospective age of Methusaleh to understand it. Here is a specimen tit-bit: "This vis-plastrix of organic composition is a sovereign faction in all promethean display, though of such subtle yet positive character, that its realms are shunned and neglected through fear and dread of incomprehension by those who have wandered by aid of the Diogenesic lamp through the mysterious labyrinths of this obscure primogenial phase, and they have at last failed to hand out to the hungry student that pabulum of mental nourishment for which our souls do most thirst and our lives grow weary and waning under the dismal aureola of savantic despoil."

We hope the author will understand us, when we venture to remark, that the spinosity and offuscation of such stultiloquence is simply amphibological.

THE COUNTRY "TRAMP."

He is generally an ignoramus, who slipped into the profession in the dark ages of dentistry, when men, like him, did odd jobs about the villages, swapping horses, digging drains, peddling, or pulling teeth, whichever came first. Now, by virtue of the early Act of Incorporation, which put honest and dishonest men on the same legal level, he is an L.D.S. He revels in the rights his license gives him, and while others keep pace with progress, and have shown an honorable ambition and self-respect, he is still the same mean peddling "tramp." He goes from door to door, with his box in his hand like a Syrian peddler, begging you to let him extract your teeth, which is his chief accomplishment, and offering you his disfiguring substitutes "below cost." He is not only thoroughly dishonest, but he is a libeller of other practitioners, whose education and honesty he takes as personally insulting. We cannot apply these remarks from personal knowledge to anyone outside of the Province of Quebec. But whose head the cap fits may wear it. The existence of such men justifies any action the profession can take to protect country people from this imposture. They are the butchers of their patients, and the botches of the profession.

A HINT TO OUR SOCIETIES.

We do not like making complaints, but we may as well be frank. We have seven Provincial Societies in Canada, and we rarely, without some personal persuasion, get notices of the meetings in time to announce the dates and the programme before they occur. It might be a good plan to appoint some one in each Society who would be responsible for this simple duty, so that the papers read, and the proceedings could be forwarded within a day or two after the meetings are over. It does not speak very well for our Societies, that the editor of the JOURNAL has to depend largely upon the reports in the daily press. We need to take a lesson from our brethren over the border in this matter. The profession generally like to know what goes on, and it would be very pleasant to us to be helped in this way.

THE STRENGTH OF UNITY.

The American Dental Association and the Southern Dental Association will meet together at Old Point Comfort, August 3rd. The meetings will be of unusual interest, as an effort is to be made for the union of the two Associations. We Canadians, as dentists, are always kindly treated by Brother Jonathan, and we will gladly welcome the union of the two representative societies.

EDITORIAL NOTES.

DR. SMITH, of Cornwall, is one of the Bisley team this year. The volunteer force of Canada has many dentists in its ranks. Most of them are crack shots.

"YOURS is a very important profession," said the Queen to Sir Edwin Saunders, "for while some require the services of the oculist and the aurist, almost everyone needs the services of the dentist."

IT IS poor economy to use old or poor burs. We know an excellent operator who lost half his practice in this way. Both he and his patients suffered for it. One of the wisest investments in the operating room, is a good dental engine run by a motor, and a full equipment for the front and back action.

THE epidemic of quackery which started a year or two ago in Toronto and Montreal, and which extended to the smaller cities and towns, is exhausting itself; but, of course, without proper precautions it is apt to return. The sheriff has disposed of three cases in Montreal, and public opinion will likely settle the smaller fry. When the reaction comes in Ontario, it will, we hope, make a clean sweep. Towards this consummation, every licentiate who has professional and self-respect should lend their aid.

READ every advertisement in the JOURNAL. They change. You must admit that you get a lot of information out of the advertisements, and much more out of those in a journal which is the advertising organ of many rather than of one. We do not insert quack or fraudulent advertisements at any price. We lose money in this way. But we protect the profession. No matter if you have read the advertisements before; read them again. Advertisers will always be glad to give you more information than they can supply in the advertisements. To keep up with the times, you must keep up with the advertisements.

IN *The General Dispensatory*, being a translation of the Pharmacopæias of the Royal College of Physicians of London and Edinburgh, published in 1753, there are many curious views of the *materia medica* of the period, especially those in use for odontalgia. The use of figs externally for "taking away swelling and inflammations of the gums" is qualified by the recommendations to apply them "in the mouth," not on the cheek. Cloves "being put into a hollow rotten tooth with a bit of cotton cures the toothache." Cinnamon, "if put into a hollow tooth with cotton wool cures the toothache, by drying and burning the nerve"

Post-Card Dots.

23. How can I sterilize rubber tubing? (L.A.)

Use dry heat: raise temperature gradually to 149°C. (284° F.) If the tubing is attached to any instrument and cannot easily be detached, after the dry heat process, place in pulverized talc, previously sterilized. Avoid using the rubber-bulb syringe, as some do (!) for cleansing abscesses. This syringe may be made a positively filthy and dangerous instrument.

24. Have we any special rights in the courts in testifying as dental experts? (T.C.)

A registered L.D.S. has the same privileges and exemptions as are conferred upon physicians and surgeons. Previous to the passing of the acts in Ontario and Quebec, dentists were "taxed" in giving testimony at the same rate as mechanics, but to-day they enjoy the same privilege as physicians.

24. Do I understand that the policy of the DOMINION DENTAL JOURNAL is to frown down all forms of professional advertising in the public press? (P.D.)

This question proves that you have not read what we have repeatedly written on the subject. Young men beginning practice need to advertise, and even established practitioners may need the use of the public press, but no one but quacks, and their imitators, find it necessary to pretend that they have superior or monopolizing methods. You may need to advertise. But you never need to lie. It would be very easy indeed to counteract the evil done by the quacks, if some such movement is actually carried out as is referred to in our last issue (see pages 203, 230.)

25. What is the last edition of *Tome's Dental Surgery*? (L.M.)

The 4th, revised and enlarged by his son, Chas. S. Tomes, just published by J. & A. Churchill, London.

26. Is there an Irish branch of the British Dental Association? (S.)

Yes, and very flourishing. The proceedings appear regularly in the pages of our valued contemporary, the *Journal of the British Dental Association*, published by Balliere, Tindall & Cox, 20 King William St., Strand, London.

27. Can you give me the names and addresses of the dental journals published in England? (C.B.)

British Journal of Dental Science (Vol. 40) published by J. P. Segg & Co., 289 Regent St. W., London: 14s. sterling per year.

The *Dental Record* (Vol. 18) published by the Dental Manufacturing Co., 6 Lexington St. London W., 7s. 6d. per annum. The *Journal of the British Dental Association* (Vol. 18) published for the Association by Balliere, Tindall & Cox, 20 King William St., Strand, London. 7s. per annum.

28. Who invented the dental engine? (T.)

A Scotchman, Mr. Nasymith, of steam-hammer fame. It was, however, very much improved in the United States.

29. Are the dangers as great in connection with the use of the Roentgen rays in dental as in general surgical practice? (S.A.)

It is said by experts that they are not, on account of the fact that the exposure is not so prolonged. At a late meeting of the Irish Branch of the British Dental Association, Mr. T. Stack drew attention to this fact, and quoted instances where the use of the rays enabled the operators to diagnose cases in a way that was otherwise impossible. A ten minute's exposure is sufficient.

Obituary.

DR. SAMUEL J. HAYES.

Dr. Samuel J. Hayes died at his home in Pittsburg, Pa., June 10, 1897.

Dr. Hayes was born on a large farm near Johnstown, Pa., June 22, 1833. He entered college when about eighteen years of age, paying his way through a course of study principally by teaching. Subsequently he finished his training with a course of theology and served in the pastorate for several years, being considered successful both in the denomination of United Brethren and the Baptist. In consequence of a severe bronchial affection, he was compelled to turn from his chosen profession and took up the study of dentistry, which he followed during the remainder of his life, about thirty years. The defects of anæsthetic agents in general and the crude condition of the science itself early attracted his notice and he thereafter devoted himself to the development of this art. In his numerous writings and lectures before schools and associations, both medical and dental, he advocated and sought to establish the bedrock principles of the science, and is considered an eminent authority on the subject, his definitions for anæsthesia and asphyxia being so clear and forcible that they are accepted as standard. By his researches and his invention known as "The Hayes Process of Anæsthesia," a means has been given the professional world of producing a true anæsthesia free from peril to operator or patient.

This process is now widely known and used in the United States and, to some extent, in foreign countries.

At the time of his death, Dr. Hayes was editor and proprietor of *The Dental and Surgical Microcosm*, a journal devoted to the interests of the dental profession and fearlessly advocating the principles of the art and science of anæsthesia as they were opened up and established by him. He had in preparation a book on the subject, which failing health compelled him to defer and which is not yet completed.

New Inventions.

THE INDIA RUBBER COMB COMPANY.

Attention is called to the advertisement in this issue of the old established firm, "The India Rubber Comb Co., of New York," who have made for the S. S. White Dental Manufacturing Co., their "Bow Spring" and "No. 1 improved" for more than twenty years, have now entered the market and offer direct to the dentists their manufacture of dental gums at manufacturers' prices. In addition to the flexor dental gum, original "Bow Spring," and light red, original "No. 1 improved," the company offer maroon, jet black and pink gums, all of which are guaranteed to give perfect satisfaction. Many testimonials are received daily by them as to the quality and general satisfaction of the pink gum, which, although not quite as strong as the English gums, it is excellent for the purpose. Full weight of rubber is delivered. Weight of the cloth and packing is not charged as rubber, as is frequently done with other rubber in the market.

The statements of the Rubber Comb Co., which was organized in 1851, are absolutely true, and can be depended upon. Their rubber dam will be found to be as good as any in the market. All the dentists should appreciate the advantages derived from being able to buy direct from the manufacturers.

DENTAL PRACTICE FOR SALE in one of the best locations in the city of Hamilton, 17½ King Street East. Office recently fitted up. Apply S. Z., 17½ King Street East, Hamilton. Ont. ❀ ❀ ❀ ❀ ❀ ❀ ❀

Dominion Dental Journal

VOL. IX.

TORONTO, AUGUST, 1897.

No. .8

Original Communications

RETIRING PRESIDENT'S ADDRESS.

DR. W. A. BROWNLEE, Mount Forest.

In retiring from the President's chair, I thank the members of the Ontario Dental Society for the honor they conferred upon me in electing me to that office. Honors frequently bring responsibility. I recognize it to have been so in this case, and I have endeavored to discharge the duties of office in such a manner that the interests of the Society should not suffer. I trust the meeting at this time will not be less interesting or profitable than any previous one. The programme before us is brimful of useful matter, and those who put into practice the instruction contained in the various papers, etc., will be better dentists in consequence of such help.

A dentist may, Robinson Crusoe like, all alone, achieve a certain amount of success, but we must all depend to some extent on borrowed ideas, if we are to reach the perfection of attainment. So association with others of the same craft for interchange of ideas and plans is a great factor in a prosperous business career.

In successful dentistry, scientific knowledge is combined with practical skill. Dentistry owes much to the practical men of the past, the profession was once entirely dependent upon manipulative skill and without any knowledge of the structure and uses of the tissues surrounding the dental organs. Now the successful dentist is the man who intelligently applies scientific principles in the treatment of every case.

Empiricism simply collects facts and pursues a certain course based upon the doctrine of cause and effect without a knowledge of the scientific reasons for said effects. Now, our mode of practising dentistry differs from the style of treatment pursued by the dentists of fifty years ago, in that we call to our aid the discoveries of science in recent years. Teeth are now saved which a few years ago would have fallen a prey to the forceps, and have been replaced by substitutes on a plate which generally works incalculable injury to the adjacent natural organs. Dr. Talbot declares that dentistry has about reached the limit of its growth in the so-called practical direction, and that henceforth its development must go forward on more scientific lines. Those who imagine that the scientific method is not making its way in the dental profession are not closely observant of the changes of the past fifteen years. What is the antiseptic treatment of root canals or the injection of pyorrhœa pockets, but the application of science to dentistry? So it is also in other cases of treatment. Our dental educators are alive to the forward movement, and are placing before our students the latest inventions and discoveries, and endeavoring to have every subject taught in an up-to-date manner. Our journals vie with each other in securing the choicest selections from the writings of the ablest professional men, and I can safely say no profession has made more rapid strides towards improvement than dentistry. The standard of matriculation in Ontario is now such that every student entering an office to study dentistry is well fitted to begin the higher education. His mind is developed so he can grasp an idea, whether presented to him orally or clinically, and if he possesses the proper amount of mechanical ability he should become a good dentist.

Through science, the dental profession is fast becoming a body of scientific men, men who are raising the honor and dignity of the profession, but, notwithstanding all this, there are not wanting men who are willing to sink everything into the mire dirt and with the hope of getting business which their skill as workmen would never attract. I appeal to every preceptor who has a student under his tuition to instill into his mind dignified ideas of his life-work.

Frequently when recent graduates begin practice in a town or city, and find it slow work building up a reputable business, they become impatient and advertise extracting without pain or cheap plates, or some other bait to catch the public who are always too ready to try something new, even if it has little merit. Sometimes the history of competition is the reverse, and the older practitioners are the first to lower the honor and dignity of the profession. In either case, such procedure results only in injury to both parties and to the profession at large.

The object of this society must be the mutual improvement of

its members, and the advancement of the science of dental and oral surgery. Such is the recorded aim as laid down in the constitution. If we are to obtain this result, we must secure the best talent within our reach, and come prepared to assimilate everything good on the bill of fare. Only those who have had a part in getting up a programme for an annual meeting know the many obstacles in the way. And here I might say, that I think the members of this Society forget Sec. 4 of Article II., which reads thus: "It shall be the duty of every active member to take such part in the programme as shall be asked by the Programme Committee." Many of those written to on the matter do not even manifest common business courtesy, and neglect to reply to the Secretary's letter.

It is the privilege of the members to help each other, and that is our object in meeting together. Every dentist has some hobby upon which he can write or talk, and upon which he is well informed, and if each of us imparts his knowledge to others, our sphere of usefulness will be enlarged. I trust we may all receive useful information at, and carry away pleasant memories from, this annual meeting.

HOW TO MAKE DENTAL MEETINGS ATTRACTIVE.*

By DR. W. M. WUNDER, Toronto.

As the attractiveness and attendance at dental meetings are enhanced by the amity and fraternal feeling among the members, it is well, I think, for the members to pay some attention to conduct before and between meetings. Let members of the society, in meeting other dentists, act in such a way as will show them they take a kindly interest in all dentists. All dentists have mutual interests. Let members of society in meeting the patient of another dentist, remember to "do unto others as you would that others would do unto you."

Never make it possible for a brother dentist to hear that you gave a patient a bad impression of his character or work. It is only a rogue who would by means of a sneer, a shrug of the shoulders, or disparaging words, criticise the work of another dentist before working for that patient. How often we hear dentists give as their reason for not joining a dental society, the unprofessional and dishonorable conduct, such as I have mentioned, of some member.

As regards the "Code of Ethics" and requirements for membership, let them prevent no honest dentist from becoming a member

*Read before Ontario Dental Society, Toronto, July 19, 1897

We come to a dental society to learn as much as possible, and, sometimes, the dentist we would bar out by our "code of ethics," has some pointers he could give to the profession, and is prevented from so doing. Personally, I think a really objectionable person would hardly feel at home, and I would leave the latch string on the outside.

Each individual should be induced to take an active interest. We see the result of this in the "institutional church" and its success. He should not only try to get as much in the way of knowledge as he can, but also, before the meeting, try to think of something that might be useful to the members present. The meeting should take place at such a time and place that the dentist attending will find it as little as possible to his pecuniary disadvantage. There is a question in my own mind whether it would not be advisable to hold the "Ontario Dental Society" meeting during the Exhibition, and always in this city, as at that time a number of dentists always come to Toronto and possibly would attend and take an interest in our society, especially as the dental depots and other attractions are in the city. It rests a great deal with the programme committee whether a society will be attractive, well attended, or not. The programme should be as practical as possible, having short concise papers. Clinics I think one of the most profitable features. I would, instead of leaving them until the last day when a number are compelled to leave, have them interspersed throughout the meeting. Have such a programme that it will pay a dentist to attend. A dentist going to a meeting, getting no ideas, considers he has wasted his time. See that the papers promised are given, and well prepared before being given.

The person opening the discussion should have an opportunity of reading the paper at least twenty-four hours before being read before the society. Commence and stop discussion at the stroke of the clock. Avoid, as much as possible, all red-tapeism, and do the preliminary business of the meeting as quickly as is consistent with doing it well and in order. Discussion should be to the point, and chronic and bombastic individuals held in check. Begin on time so as never to forget the Question Box and Incidents in office practice. Sometimes we receive more benefit from the answering, by the members present, of some simple question, such as, What labial clamps do you use with the greatest satisfaction? or, How do you cap an exposed pulp? than from some long dissertation, good no doubt, on "The teeth of the Mammalia," or similar subject.

A PLEA FOR THE PRESERVATION OF THE NATURAL TEETH.*

By C. N. JOHNSON, L.D.S., D.D.S., Chicago, Ill.

It would appear to be the manifest duty of every man, in whatsoever station in life his lot be cast, to aim at the accomplishment of that which will result in the greatest possible good to the community in which he labors. More especially would this seem to be true in the case of those entrusted with the health and morals of their fellowman. A merchant may sell his customer a defective piece of goods and thereby stamp himself a dishonest man, but the real evil of such a procedure eventually falls upon the individual who perpetrates the wrong rather than upon the one who is wronged. A dealer in horses may misrepresent the soundness of an animal and complacently claim that it is merely one of the "tricks of the trade." Both the merchant and the horse dealer are offenders against the morals of the community, and are to that extent bad citizens, but the issue of their misdemeanors is more or less restricted and not in the broadest sense a serious menace to the welfare of the commonwealth.

Not so with the transgressor in certain other walks of life. The man who has in his keeping the physical well-being of the people cannot be lax in his methods without setting in motion a train of evils, the consequences of which may work havoc in generations yet to come. The duties of the professional man assume a more exalted bearing and hold a closer relationship with grave responsibilities than those engaged in the marts of trade.

These considerations are suggested in studying our present status of accomplishment in the practice of dentistry. Are we doing as much as we might do for the welfare of humanity? We are advancing rapidly in the mechanical perfection of our art, and are supposed to be a most progressive profession, but in the broader sense of a high moral purpose, are we living up to our greatest possibilities? In one respect at least I am constrained to believe that the true answer must be in the negative.

It will probably be admitted by all that the greatest possible service the dental profession can render humanity is to preserve the natural teeth in a state of health and usefulness. Is the profession doing this to the full extent of its capabilities? For answer I ask you to study the mouths of the people on our public thoroughfares or in an average assemblage of average citizens. In too many instances we see the mouth in its artificial environment marring

* Read before the Ontario Dental Society, July, 1897.

the features of otherwise intelligent and beautiful individuals.

While this may not be directly construed as a reflection on the dental profession in all instances, yet if the matter be sifted to its legitimate source it will be found that at bottom the profession is mostly responsible for it.

A people are largely influenced by the trend of thought followed by their professional advisers. One of the main offices of a professional man is to educate the community to the highest and best of which his profession is capable, and as an evidence that this may be successfully accomplished, we see material differences in the existing state of the teeth in different communities. In some localities we find the mouths well cared for and the natural teeth for the most part preserved, while in others the teeth are allowed to run riot and give way to artificial substitutes without number. And it is just at this stage of the present paper that I wish to begin to particularize. My purpose in bringing this subject before the dentists of Ontario is fostered by the fact that within the range of my experience I see more artificial teeth according to population worn in Ontario than in any other place I have ever visited. Lest there may appear to be a shade of provincial prejudice in such a statement, I hasten to add that I was formerly a practitioner in this fair Province myself, and am free to acknowledge that in all probability while here I put in my full quota of ill-advised and in-harmonious artificial teeth. For this species of mild malpractice I am impelled even at this late date to offer my humble apologies to the people, and to the profession whose standard I to that extent degraded.

And yet, in my most magnanimous mood I cannot quite bring myself to admit that in those days there was anything like the slaughter of natural teeth that we see to-day. I can vividly recall my own early efforts to educate the people in the care and preservation of the natural teeth, and while, as just admitted, I did not do all that I should have done in that direction, yet I feel that even in those days I accomplished something for the good of the people and the profession. It may be claimed that there was then a larger opportunity for doing good, with a smaller measure of discouragement than there is to-day. Dental offices did not exist in departmental stores, and the day of the full-fledged five-dollar-a-set man had not yet arrived. But the greater the necessity the more earnest should be the effort.

And this leads me logically into the consideration of some of the causes which have brought about the present status of dental practice in the Province. I have said that I see more artificial teeth worn here than anywhere else. I certainly see more young people with artificial teeth or defective natural ones than in any community I have ever visited. In encountering this wholesale exhi-

bition of chinaware I have been led to look into the reasons for such a condition of things. Of course it may be stated on general principles that the prime factor in the case is a lack of knowledge on the part of the masses as to the real value of the natural organs, and the necessity for preserving them in a state of health. In the minds of the people there is not a sufficient distinction between the serviceability of a perfect set of natural teeth and a set made by the dentist. This lack of education is often attributed to a fundamental obtuseness on the part of the community, and I have noted that a great many dentists, when taken to task for allowing such a state of affairs, take refuge behind the assertion that it is impossible to educate their patrons up to a proper appreciation of the highest class of dental service.

It is probably true that certain communities are more difficult to educate than others, and that in some instances it is uphill work to attempt a reform. But I hold to the conviction that the duty of the dentist never stops short of an honest and persistent effort to enlighten the people who come under his care, no matter what their station in life. This effort must not consist merely in spasmodic and occasional dissertations presented in a half-hearted way, and lacking the force of conviction on their face. But it should be a living and abiding faith held sacred by the tenets of professional and humanitarian responsibility, and should constitute itself a feature of every-day practice to be pursued as conscientiously as any other part of office routine.

The dentist who has the welfare of his patients and his profession sincerely at heart will never deem it too much trouble to enter into explanations and offer painstaking advice to even his lowliest patron. His efforts may all too often fall on an unrequiting soil, and he may meet with countless rebuffs and discouragements, but in the end, with daily endeavor, he will see the happy results of his sowing, and if he does not succeed in leavening the whole lump, he will at least immeasurably raise the status of dental practice in his community.

There are many methods of interesting people in these matters, and the dentist must employ tact in his management of the different classes which come under his care. It will not suffice simply to make an unvarnished statement to the effect that the natural teeth are better than artificial ones. The lessons must be driven home by a quickwitted grasp of the situation, and an attack on any vulnerable point the patient may present. No two people can be managed precisely alike. As a practical illustration to rivet attention in certain cases, let me suggest a line of argument something like the following: Suppose your patient assumes—as patients sometimes are prone to do—that a set of artificial teeth answers every purpose, and that it is therefore not worth while striving to

save the natural ones. If you ask that patient to admit that perfect mastication is necessary to the most perfect health, he will usually agree with the proposition, because this is a generally recognized fact among all classes. The admission will likely be accompanied, however, with the statement that people are able to masticate with artificial teeth. Then is the time you have your patient at your mercy. You can go at him with cold facts in such array that he must retreat crestfallen from the controversy. Tell him that experimentation has shown, that when the natural teeth are in good condition the jaws are capable of closing with a force reaching in some instances to nearly, or quite, 300 pounds; that the average individual can exert more than 100 pounds pressure with the natural teeth; and that to properly masticate ordinary beefsteak it is necessary to use at least seventy or eighty pounds—to say nothing of the extraordinary article so often palmed off on a long-suffering public. Then ask him how many of his friends wearing artificial teeth are able to exert seventy pounds pressure with them? He will begin to take on a helpless look by this time, and you can clinch your argument by saying that the average force exerted by artificial teeth runs along about fifteen or twenty pounds. Tell him that artificial teeth would be smashed to smithereens as fast as they could be inserted if it were possible to use them as the natural teeth are used. Such a presentation of the subject will at least cause your patient some reflection, and start him thinking on a problem that never before entered his mind. I might also add that this form of reasoning may not be altogether lacking in moral features with a great many of our dental friends themselves.

The dentist owes it to his patients to study up ingenuous methods of argument to gain his point in their general enlightenment, and the man who devotes himself conscientiously to the better education of his patients will reap not only the reward of an appreciative *clientèle*, but in the end will receive material recompense in a higher remuneration for his services.

But to return to the previous question. The universal use of artificial teeth must not altogether be laid at the door of ignorance. In latter years, when the stress of financial depression has pinched the people on every hand, the question of cost has had its influence. It has, in many cases, been cheaper to fill the mouth with porcelain than to preserve enamel and dentine. This is one of the abominations of low-grade dentistry. Not that it is a misfortune to have the poor man readily supplied with artificial substitutes at nominal cost when the natural teeth are irretrievably gone, but that the low price of artificial teeth has resulted in the sacrifice of innumerable natural teeth that would otherwise have been preserved. I have heard an eminent dentist make the statement, that it would have been better for the people and the profession, if artificial teeth had always been ten times the prevailing price.

But, after all these considerations are stated, I am strongly inclined to the belief that the greatest of all causes leading to the wholesale use of imported chinaware in the mouths of our patrons has yet to be mentioned. I may be treading on delicate ground, but I take the step boldly because I believe my impression to be correct. *It is my conviction that much of the indifference manifested by the people in regard to saving the natural teeth is born of the fact, that failure has too often followed an honest attempt on their part to save them. In other words, our profession has not lived up to the highest possibilities of the science and art of dentistry as applied to preservation of the natural teeth. Patients have their teeth filled and pay for it, only to find in a few years—sometimes in a few months—sometimes even in a few weeks, the work undone, and the last condition of that mouth worse than the first. It requires not many experiences of this kind to foster the idea that teeth cannot be saved, and that the practice of filling them is a delusion and a snare. I have heard this argument used many and many a time by people who referred to their own experience as proof. This brings us squarely face to face with the question as to the probable permanency of fillings when properly inserted. Is it by virtue of necessity that so many fillings fail after a limited service? Must we acknowledge that with all our boasted handicraft we are able to accomplish nothing but the most temporary results in our operations? A few years ago a practitioner published a statement wherein he sought to prove by tabulated records, that the average duration of a gold filling was only about three years; and I very well remember a good friend of mine getting up in a meeting shortly after and claiming that he thought the estimate too high. I rebelled strenuously against such an assertion at the time, and, to-day, I rebel more than ever, in the light of a careful study of my own records, after a continuous practice in one place of more than twelve years. I want to say to you gentlemen, in all sincerity, and with nothing but the most modest opinion of my own ability as an operator, that if I was not thoroughly convinced, that every day of my practice I was inserting fillings that would do service for ten, fifteen, twenty years—in fact, for the future lifetime of the patient, I should feel a sense of humiliation and defeat sufficient to stamp me in my own estimation as a failure among my fellow men. That this is no idle boast, and that I am not alone in the conviction, I give you the sentiments of two men of integrity in the profession, both modest and reliable, both carefully studious of their records, and each having practiced in his respective locality between thirty and forty years. One of them is now dead, the other living. One said to me, when questioned on the subject, after due deliberation and a modest estimate of his work—he was, in reality, one of the most modest men I ever

knew—that, “with a conservative statement, he could claim for his gold fillings an average service of at least fifteen years.” That may appear astounding, and even ridiculous to those who did not know this man, and who are viewing every day the work of the average operator, but I knew him well enough to be assured of his sincerity in making the statement, and I have seen sufficient of his work to convince me that he was not over sanguine in his estimate.

The other man, in discussing this subject with me on one occasion, made the assertion that, “with the exception of those occasional cases, where there seems to be an intensely active tendency to caries, that gold fillings inserted under favorable conditions, and with a full observance of the most approved principles, will last practically a lifetime.”

Here we have in these two examples an inspiration toward the accomplishment of all that is greatest and best in our profession, and these men, with others of their ilk, have stamped the seal of professional stability on the records of the past, and pointed out the future possibilities of the highest class of dental service.

The chief difficulty with the average practitioner of dentistry is, that, in his daily work, he does not look carefully enough into the relation of cause and effect. He sees that a filling has failed in a tooth, but he does not stop to study the reason for that particular failure. He knows that, in one case a filling will do good service, where in another, with apparently equal care and similar conditions, his work seems to go for naught. His usual explanation is, that “in the one case, he is dealing with ‘hard teeth,’ and in the other, with ‘soft teeth,’” but recent investigation has proved that there is little intrinsic difference in the structure of teeth of different individuals, and that even where there is a slight variation it seems to have little or no effect on the carious process. The fact is that we must cease hedging ourselves behind this story of “soft teeth,” and must no longer offer it as an excuse for the failure of our operation. There are other causes at work which render it more difficult to save some teeth than others—causes which require careful study, but which cannot be considered in the present paper. Incidentally, however, it may be proper to state that the question is one of immunity from caries, or susceptibility to caries, much the same as we find immunity or susceptibility in other diseases. And, while on this subject, let me pause long enough to call attention to one feature in connection with it which seems to me to be of paramount interest, and to offer us the greatest possible encouragement in the management of those especially difficult cases, where the process of decay seems so rampant as to dishearten the most persistent and painstaking operator. Clinical experience goes to prove that in the vast majority of patients this intense susceptibility to caries is

seldom constant. In other words, we may find in one of our young patients the teeth breaking down at an alarming rate. Decay recurs around filling in a discouraging manner, and new cavities crop out on all sides. Usually a case like this is given up as hopeless and the teeth sacrificed, but if the operator will only have the courage and patience to vigorously fight back the outbreak, he will find in nine cases out of ten, that, when least expected, there will be a change in the susceptibility, and the carious process will practically cease. I have seen this occur so often that I am no longer daunted when the worst possible case presents itself, and I am the more encouraged to go on and do the best I can for my patients, in view of the experience of an old and reliable practitioner, who recently stated to me, that in all his career he had not met a dozen cases where the carious process had been continuously persistent. We owe it to our patients to take these cases vigorously in hand and do the best for them that the most advanced teaching will permit us.

But there is still another feature of this matter relating to the failure of fillings that I wish briefly to touch upon. I have said that the average practitioner does not study closely enough the relation of cause and effect when a filling fails. How many operators carefully consider why it is that a certain filling in a motor, or bicuspid, for instance, is forced out of place in a few months, when another filling anchored in precisely the same way remains secure for years? Did it ever occur to you that the force of mastication differs greatly in different individuals, and that in the one instance there was double the amount of pressure exerted on the filling to dislodge it that there was in the other? I have just stated that some individuals are able to close the jaws with a force of 300 pounds. Others, even with their natural teeth, can scarcely reach half that amount, while it has been learned that in the natural process of mastication there is the widest variation in the force exerted. Would any intelligent man expect to anchor a filling in a mouth where there was the maximum force in the same way that he would where there was the minimum force and expect it to remain equally well? And yet dentists every day are inserting fillings without the slightest reference to the stress which is likely to come upon them. I commend a study of this matter to the members of the Ontario Society, with the belief that they shall thereby proceed more intelligently in the anchorage of their fillings.

If dentists would develop definite modes of thought, and would carefully search out the causes of each failure that presents itself so as to avoid a repetition in the future, it would soon immeasurably increase their usefulness and add materially to the permanency of their operations. It would then not be long before the

people would appreciate the benefits of dental science, and the hue and cry of to-day which seems to have for its watchword, "artificial teeth forever and everywhere," would give way to a proper respect for the natural organs, and would place dentistry in a more honorable light before the world.

I have written already too long, but, if time permitted, I should like to go more fully into the details of what I conceive to be a growing evil—the present defilement of the human face divine. What shall the dentist of the present have to answer for when, in a half century hence, the results of his mad havoc of to-day shall have left their indelible mark on the physiognomy of the nation? We are making for good or ill in all we do, not only for the present, but for future generations; and it is meet for us, that we so discharge our bounden duty, that posterity, instead of heaping maledictions on us for the disfigurement we have wrought, may find it in their heart of hearts to rise up and call us blessed.

DENTAL JURISPRUDENCE.*

Dental Jurisprudence is an old subject and of the greatest importance, yet one of which but little is known by the average practitioner. The "American System of Dentistry" is, to my knowledge, the only work giving any information on the subject. However, the Board of Directors of the College have, quite recently, placed the subject on the curriculum, and now the student on completing his course has, under the lectures of the Hon. David Mills, imbibed the spirit of the legal difficulties with which he may at some unfortunate time be beset.

Dental jurisprudence may be defined, as the science which teaches every branch of dentistry to the purpose and knowledge of the law. In order then to thoroughly understand the subject, a knowledge must be had, on the one hand, of the law and, on the other, of the professional subjects: Anatomy, Physiology, Operative Dentistry, Materia Medica, Therapeutics, etc. The jurisprudence of dentistry resembles very much that of medicine, with the exception of a few special points which pertain exclusively to the former profession.

The obtaining of the title of L.D.S. grants the holder permission to practice dentistry in all its branches. This legally interpreted means the care of the teeth when sound, their treatment when diseased, and their substitution when lost through any cause. It includes the extraction, filling, replantation, implantation, and transplantation of the teeth, their regulation, the treatment of the

* Read by Dr. H. A. Croll Palmerston, at Ontario Dental Society meeting, July, 1897.

gums, alveolar process, antrum and adjacent bone, both by operative and mechanical means. It also includes prescribing for constitutional treatment when such action is necessary in the treatment of abscesses, trigeminal neuralgia, etc. A person therefore must be qualified according to law if he is to pursue the practice of dentistry or he will be doubly liable for damage: firstly, for practicing without a license; secondly, for lack of necessary skill.

According to law a dentist is responsible for his work. When his assistant does not perform the operation prescribed the dentist is responsible if present, but not so if absent. If the patient requests the act of the dentist, such as the extraction of a sound tooth, he assumes the responsibility, but the dentist is responsible as to the manner in which the operation is performed. If the patient is insane the responsibility of the case rests solely with the dentist. The same applies if the dentist uses new instruments or new drugs with which he is comparatively unacquainted. This is a hard rule, but is for the protection of the public and to prevent experiments being performed upon them. Patent nostrums must have a good reputation to be in general favor. When a dentist operates in a manner contrary to any old established opinion he is liable to censure. A dentist is gravely responsible if he operates when he is intoxicated or when he has not the necessary appliances at hand. These are a few of the responsibilities resting upon dentists.

Should a patient bring into court a case against a dentist it would of necessity be for malpractice. This may be defined as improper management of a case, or such treatment as produces injury, or is illegal. From both a dental and legal point of view it may arise from wilfulness, negligence, or ignorance, and subjects the offender to penalties in any of these categories according as error or criminality is proved.

A case under the head of wilfulness can be entered only when the dentist has expressed malice and an intent to commit wrong.

Negligence may be divided into three degrees:

1. Slight: Where lack of great care and diligence is shown.
2. Ordinary: Where ordinary skill is wanting.
3. Gross: Where total lack of care is shown.

The state of the patient's health makes a difference in the degree of negligence, the law recognizing that more care should be shown a patient in poor than one in good health. A dentist pursuing obsolete methods is held to be negligent. It is of the utmost importance that his instruments be antiseptically clean. Omission of this is a case of negligence of the most inexcusable type. Negligence is due to want of care, want of habit, loss of morals, and indifference to business. If the patient by ordinary care could have avoided the negligence of the dentist, he can make no case. But

if he can establish that he has not been a contributor to the injury, he may proceed to recover damages.

The standard of skill, or ordinary skill, is that which is the result of the acquaintance with the improvements of the day. The standard of skill is supposed to be greater in cities than in towns and villages, owing to the advantages of libraries, the variety of operations, the opportunities for forming societies and attending conventions.

Should the dentist perform an operation, being incompetent, instead of handing it over to some more capable person, he assumes great responsibility. The more difficult the operation, the greater the liability. Should he be lacking in ordinary skill or guilty of negligence or carelessness he is liable for damages; but if the patient has not strictly carried out the instructions, the dentist's liability is removed. If ordinary skill is shown, he enjoys immunity. It is difficult to show that the dentist does not possess ordinary skill, as he possesses a *license*, to obtain which he must have demonstrated that he possessed ordinary skill. Suits therefore must be entered for negligence. Specialists in any branch are doubly liable as from their proclaiming themselves as specialists, the law supposes and expects them to possess more than ordinary skill.

Diligence must always be shewn. It is the duty of every operator to bring into play all the skill he possesses, but no more than ordinary skill is required of him unless he be a specialist.

A case for malpractice cannot be brought into court if twelve months have elapsed since the injury was first noticed. Should one be brought against a dentist, if he can prove that he has acted honestly in treating the case, and has not thrust himself in the way of a competent person, he is wholly irresponsible. It is necessary that gross negligence or ignorance be shewn. The fact that the dentist had no intent to be negligent does not absolve him, as in the eye of the law the deed shows the intent. Where competent aid may be had, a violent remedy given alone involves criminal responsibility. A consultation relieves the dentist of this.

When sued for malpractice the dentist must give the nature of the case, whether acute or chronic; the state of the case when treatment was commenced; his course of treatment; the treatment called for and the opinion of other practitioners. He should prove that there was no negligence, and, if possible, that there was delay in seeking aid. If he can prove that he had made a proper diagnosis and given proper treatment, and that all the trouble was due to unforeseen constitutional disturbances, the jury will be influenced by a thoroughly well posted counsel.

The considerations in fixing damages are:

1. The extent of the injury.
2. The pain the patient has undergone.

3. The subsequent effect upon the patient's health.

4. The pecuniary loss to the patient.

Where a patient dies in consequence of injuries from negligence or lack of skill, the amount of damages is not to exceed that which the patient could, if living, earn in three years.

Dentists are in some cases summoned as expert witnesses. Under this heading they are allowed extra fees. A dentist is supposed to keep secret the transactions between himself and his patients. In criminal cases the dentist gives the facts of the case in court without breach of honor. The expert witness is allowed to refer to his memoranda, which need not be in his own handwriting, but may not refer to text-books. He tells what he believes, the ordinary witness what he knows. He should avoid technicalities, making everything clear, and should never express an opinion on any subject with which he is not perfectly familiar or he may get slightly mixed.

In Canada a patient is not liable to pay for a piece of work costing over \$40.00 if there is no written agreement, part payment or exchange of some article in lieu of cash. A dentist cannot be compelled to render service to a patient when requested, but when once he has taken charge of a case he must continue his services until the case is completed or he is dismissed. A dentist has a right to charge for time lost by an unfilled appointment. The circumstances of the case and the evidence will influence the decision. He also has the right to retain a set of teeth made by him as security for reasonable charges. This right is waived by parting with them or agreeing to give credit for them. Legally no limit is placed upon dentists' fees. They regulate themselves according to the reputation of the operator, the difficulties of the case, and the circumstances in general.

I have above endeavored to give a *resumé* of the law governing us in the practice of our profession. Of necessity much was omitted, but the whole of the subject requires a paper which would necessitate an entire day's reading. I trust that I have presented the subject in a manner that some one may have been able to grasp a few heretofore unknown facts.

SUITABLE RECREATIONS FOR DENTISTS.

By M. CAVANAGH, D.D.S., Owen Sound, Ont.

It will not be the object of this paper to go very deeply into the scientific aspect of this subject, but to bring before the convention and the members of the profession at large a few plain facts with regard to the subject of recreation, and the vital importance of properly disposing of our spare time or "off hours" from the toils

of the office, that we may obtain rest from our daily occupation and at the same time develop our faculties along other lines than those of our profession, so that in the end we may bring greater strength, clearer judgment, and better skill to the service of those who repose confidence in us, and that we may be more worthy of that trust.

It is a subject that in my mind has not had the prominence in our dental literature and dental education that its importance deserves. We find a superabundance of theories on pyorrhea, on treating and filling nerve canals, on crowning and bridging; but on the subject of *recreations* (which I feel safe in asserting is just as important to the dentist as any of the above, unless he has great faith in the reward that awaits the martyr), we find very little information. The reason for this lack of attention to this particular subject no doubt originates in the old idea that education consists in book-learning, and that time spent on other than our life vocation is time wasted, and a great many members of our profession are living up to this old and exploded theory to the letter.

In dealing with the subject of recreations in this paper, we will make use of the term in its broadest sense. The word is derived from the Latin "creo"—I make, and the prefix "re," meaning again, the literal meaning of the word being to make again, to build up or renew; therefore any agent, any exercise or pastime that aids in invigorating or developing us physically or mentally may properly be called a recreation. One writer on this line says that our first aim and object should be to be men, and, second, to be dentists. Therefore every agent that assists in building up a strong, energetic, well-rounded manhood is of necessity a recreation, and all recreation should be indulged in with this worthy object in view of improving ourselves. It is therefore an educational process, and may overlap or be overlapped by some other papers on the programme.

The dental profession is known by all present to be exacting both mentally and physically—exacting on the mind owing to the fineness of the work and the close application and attention to the most minute details necessary to insure even moderate success; wearing, physically, owing to its confinement, to the long hours spent in one position—and very often an unnatural position at that—and to the undue length of the day often necessary to keep even with our work; trying, both mentally and physically, owing to the frequent and harrowing ordeal of spending hours on nervous, irritable patients, who exact their "pound of flesh," and a greater proportion of patience and nerve force every time they call on their dentist. Therefore, just in proportion to the amount of physical, mental, and nervous strain we undergo, just in that proportion does our

system demand counteracting and recreative influences, and just so sure as these influences are neglected, just so sure are we on the gradual decline that leads to ill-health and all that it entails, viz., loss of professional skill, loss of practice, loss of income, loss of happiness, in fact loss of the ideal we sacrificed health in trying to maintain; simply killed "the goose that laid the golden egg," and yet how many are committing this gradual suicide. Comparatively few professional men, and especially dentists, utilize their hours of recreation intelligently with reference to the nature of their daily duties and the compensating character of the exercise necessary in order to maintain mind and body in normal and healthy condition.

It is an axiom in the active life of the world, "That to the young all things are possible," meaning simply that with youth and its adjuncts, health and strength, we should all obtain an enviable position in whatever line our occupation may be. In order to accomplish this pre-eminence, health is the first essential. We find practical illustrations of this fact by looking back over the intellectual lights of the world, and find that the most brilliant intellects that maintained their power for any considerable length of time were supported by strong and vigorous bodies, so we conclude that the maintenance of health is of the utmost importance if we are to excel in our chosen profession.

Health is the greatest of temporal gifts. It is an essential to the faithful and competent discharge of duty in every walk of life, and in this age of keen competition it is almost a necessity to success, and each of us has the obligation devolving upon us of maintaining in as great a degree of perfection as possible this priceless boon. It is immeasurably of more importance than any gain that may be obtained from its sacrifice.

It is also one of our best advertisements; the dentist with healthy, robust frame has a great advantage over his equally skilful brother practitioner in a languid or emaciated body from the standpoint of personal attraction alone, and this certainly counts for something in our profession; besides, no matter how strong the intellect or skilful the hand may be, it can never be at its best or render the same service when laboring under the disadvantage of ill-health that it could if supported by physical strength. The happy possessor of health and strength will accomplish more work, do it better, and do it with more pleasure to himself and satisfaction to his patients than he otherwise could do.

So viewing this subject from any and every standpoint we can but come to the conclusion that the obtaining and maintenance of health and strength is our first duty, and should be an important portion of our education.

• Physical exercise or recreation carefully and judiciously indulged

in is the recognized fount from which springs health and strength. "Shun drugs as you would a plague" are the wise words of one authority on this subject.

As health and strength are the first and most important factors in perfectly developed manhood, we shall first dwell upon the recreations best adapted for physical development and culture and their action on the human frame and organs.

Admitting the value of health and strength, then we may ask, What is health and strength, and how are they to be obtained and maintained by any system of exercise?

Health consists in such a condition of growth and development of the organs of the body as enables them to fulfil their functions easily and completely, and to resist effectively attacks of disease; therefore, it includes in its meaning a certain degree of strength, and strength properly obtained is in the highest degree conducive to health.

Before discussing fully the best methods of recreation for physical development, it will be necessary to take into consideration certain elementary physiological facts that we may more readily see the beneficial effects of exercise.

The life of the body as a whole depends upon the life of innumerable atoms which constitute it and which are continually dying, being cast off and replaced by others, and the general health depends directly upon the activity of this recreative process and the perfection with which it is carried on. The blood carries to every tissue and organ of the body the food necessary for its repair, growth or development. If we move a hand or take a step, certain cells or atoms die and are disintegrated as a result of that movement, new cells must be supplied to take their place and the old ones must be removed and carried to organs whose functions it is to eliminate them from the system. All this is done by the blood which, however, becomes loaded with effete material, much of which is thrown off by the lungs in the form of carbonic acid gas.

The health and strength of any individual are in direct proportion to the thoroughness and celerity with which these broken down cells are removed from the system and replaced by others, and consequently anything which promotes the activity of this process is a beneficial and healthy recreation. The only means for safely and continuously stimulating this process into increased activity is physical exercise.

Exercise may be defined as *muscular contraction*, and acts in a manner readily understood. All movements are made by such contraction. If we raise an arm, take a step or bend a finger, we accomplish it, because in response to our will, certain muscles or sets of muscles contract. This is true of all voluntary movements. Other sets of muscles, of which the heart is an example, are not

controlled by the will, but act in response to other stimuli. The stimulation of the muscles of the heart is produced by the pressure of blood itself, particularly the venous blood which is brought back from the tissues laden with carbonic acid.

As soon as any act of exercise is begun, a number of the voluntary muscles are put into action. Their contraction compresses the blood vessels and impels the venous blood actively towards the heart, which thus stimulated, vigorously sends the blood in large quantities to the lungs. Then the inspiratory muscles contract and lift the frame of the chest, enlarging it both laterally and antero-posteriorly; the diaphragm pushes down the contents of the abdomen and air rushes into the chest to fill the space thus produced and supplies the oxygen necessary for the purification of the blood; this is then returned to the heart to be distributed anew throughout the system, carrying with it the materials needed to supply the waste caused by the muscular movement originally made. These materials, with regular and systematic exercise, are deposited in larger quantities than are required to counterbalance the destruction which has taken place, then we have the muscles growing or increasing in density or both.

The involuntary muscles also, including the heart and diaphragm, grow stronger in the same manner, the pulsations of the heart becoming more forcible with exercise, but at the same time slower and less obtrusive, showing that it accomplishes its work more easily.

The increased activity of the circulation carries the blood in larger volume, not only to the muscles, but also to all the organs of the body and thus stimulates them to greater activity, strengthening the appetite, digestion and nutrition, thus causing a gain in weight.

The lungs expand more fully and completely and take in an increased quantity of air, thus improving the respiration. The larger amount of blood sent to the skin increases perspiration which carries with it much of the worn-out and useless material of the system through the pores of the skin and thus adds to the resistive power against evil influences from without, such as bad air, etc. The bony framework of the chest, though elastic, does not go quite back to its original dimensions, but gradually increases in size, giving additional room for the important organs which it contains and protects. Thus we find that physical exercise is a recreation indeed, and is essential to the body if we are to keep it in a vigorous, healthy state, for it is by *use* that we develop.

It is true that the voluntary muscles that are the first cause of the action are benefited to the greatest extent, but at the same time we add to the functional ability of the involuntary muscles, while through the process of respiration and circulation we in-

fluence not only the health and strength, but also the growth and development of the whole body, and thus we find in various physical recreations, the secret by which any part of the physique may be strengthened and developed.

The rule of health which prescribes exercise is most easily transgressed, to violate it is only to disregard it, and a sin of omission is always easier than a sin of commission. All glaring sins of commission bring a direct and traceable result. Intemperance, gluttony, and dissipation of all kinds speedily bring a penalty with it, but the evils due to the want of recreation, though no less serious, are insidious and elusive, and, when we feel the result, in languidness, want of energy, etc., tonics, stimulants and drugs are generally called upon to produce results which would be far more radical and permanent, were we to follow out nature's method, and systematically and moderately indulge in suitable physical culture. We have in this the remedy for most of our ills.

While physical recreation is invaluable in regulating the system and preserving its tone and vigor, care is necessary in prescribing it, and indulgence must be tempered with wisdom and judgment or it is sure to defeat its own end. Our national sports are beneficial, and can only be recommended when participated in with moderation. The desire should be not to excel along any particular line of athletics, as excellence means over-development in this age of professionalism and should be discouraged. The professional athlete, while appearing to be a model in physique and the picture of health, is, as a rule, short-lived, owing to the vitality being consumed or the vital organs strained in the over-production of some particular set of muscles, rather than the moderate development of all the organs and muscles of the body.

There can be no fixed rule laid down for the taking of exercise, as each constitution differs in its demands, and it should be the aim of each individual to discover their physical weakness and to patiently and persistently endeavor to bring their debilitated organs or faculties up to the standard. Wonders can be accomplished by patience and perseverance. Sandow, Sampson and Cyr, men who have astonished the world with their feats of prodigious strength, are just as much marvels of patient, untiring effort in their training as they are marvels of strength. We do not make use of this illustration with any intention of its being an incentive to imitate these men, but mere examples of what can be accomplished in physical development, and that even the weakly and delicate may be sure of the result if they persevere in moderate exercise.

While there can be no hard and fast rule for our guidance in this matter a few general principles may be of service in bringing us to a decision as to what kind of exercise is beneficial in our case.

1. Individuals with weak heart, lungs, or, in fact, any of the vital organs, should not participate in any very violent or exciting recreation, or the result will be fatigue and weakness ; much the same effect as is produced by overwork ; mild exercise, gradually increased, must be the rule for such, if the effects are to be beneficial.

2. Those of strong physique demand more vigorous exercise, but their natural tendency is to develop along the lines they need it least ; having strong arms and back they adopt rowing, weight athletics, etc., which further develop these already powerful sections of the frame instead of bringing the weaker portions up to this standard of excellence. Those with powerful lower limbs naturally take to walking, running, jumping, bicycling, whereas the muscles of the arms and chest should receive special attention.

3. Those of highly nervous temperament require plenty of sleep and abundance of fresh air. Sleep alone is said to be the secret of Gladstone's wonderful power of endurance ; other instances are on record where people of great business capacity found one day each week spent in sleep necessary to keep the mind fresh and vigorous and the nervous system equal to the strain, and yet, if any part of the day has to be shortened to make more room for work it is generally the hour of sleep, but always to our injury.

4. Those having a natural fondness for athletics should be guided and even restrained, while those of more sluggish temperament and studious habits require to exercise will power and force themselves into a course of physical culture as the only remedy for a languid, listless frame ; a renewal of our energies is not brought about by idleness, laziness or dissipation ; it is use that hardens muscle, develops intellect and gives freedom from that sense of fatigue, that is the portion of those who lapse into indifference mentally and physically, or degenerate into mere " money makers."

Second only in importance to physical recreation is the culture and development of the intellect, and as physical activity is necessary to physical strength and endurance, so is mental activity essential to advancement in the realm of knowledge.

It is not enough that we should know a great deal about our profession ; no matter how well posted or how perfectly developed we may be along one line or channel, we are of necessity narrow minded and somewhat of a bore to the society in which we are placed, unless subjected to the broadening influence of study and culture along other lines.

This can only be accomplished by those engaged in professional duties throughout the day by judiciously occupying their hours of recreation. It is this intelligent use of our spare time that constitutes the difference between the recreation of a man and the rest of

an animal. These hours, though somewhat limited, are not to be despised. Many a man has become famous through carefully employing them with a definite object in view. It is the intelligent use of these hours that prevents us degenerating into cranks and old fogies, and falling into grooves and ruts in our professional life.

As an illustration of what the want of educational influence and the necessity of progression will accomplish, I wish to relate a personal experience with a member of our profession who lives less than 100 miles from the city of Toronto. He was a stranger to me, but I called on him when passing through his town, and had not been in his presence a quarter of an hour before I found out I had struck the fountain-head of dental knowledge. Crown and bridgework were accomplishments of his when the Dental College was struggling with the alphabet of dentistry; in fact, this worthy institution, from the dean down, was a huge swindle, and all that was necessary to make a brilliant success as a dentist, was to possess the same amount of brains that he possessed, and use them as he did, and then dental colleges, conventions and literature were a needless expenses. It is needless to state that this dental headlight is only such in his own estimation.

This is perhaps an exaggerated instance of bigotry and narrow-mindedness, but we certainly, one and all, descend the plane to a certain extent that leads to this goal, unless we take advantage of the opportunities we have to broaden our sphere of comprehension, and brighten our ideas by learning from those who have had more experience than we.

While recreation along other lines is most essential, we should not exclude entirely the subjects that relate to our profession.

One of the very best and most profitable means of recreation is the annual and local conventions. In addition to the papers read, discussions engaged in, and information received, there is the indefinable satisfaction of contact with numbers of men who are engaged in the same occupation; the renewal of old acquaintances and friendships; difficulties explained away, and many other benefits derived from thus meeting and indulging in professional intercourse, and, while it is somewhat along the line of our office work, it is so entirely different in its relations and surroundings, that it affords a complete rest, so that, at the end of the vacation, we return with renewed health, brain rendered more active, and a sense of weight removed which continues as an incentive and inspiration through the balance of the year.

One essential to an ideal mental recreation is that it must be of absorbing interest, such that it will take our minds and attentions entirely from the worries and responsibilities of our office-work, giving the faculties thus employed a complete rest, and, at the same time, developing others not thus employed.

It should be entertaining and instructive, something for which we have a natural inclination, and which attracts us toward it rather than requires compulsion on our part, for anything that becomes a labor adds to the fatigue of the day rather than an aid in recuperation.

Another essential in our choice should be the value of the subject as an education. It is a very easy matter to fritter away our spare moments in a light, frivolous kind of reading or other pursuit, perhaps pleasurable in its character, and, to a certain extent, restful from our daily toil, but from which we obtain no lasting benefit, and which is in reality injurious in that it dissipates the mind, makes it less retentive, and destroys a taste for that which is weightier and worthy of our consideration.

Still another object should be to pursue each subject chosen (and they should be limited to correspond with the time at our disposal), until we acquire more than a passing knowledge of those undertaken that we may fit ourselves for usefulness outside our profession as well as in it. Great good has been accomplished, and many men made famous by properly used hours of recreation.

All of our possibilities do not lie in the one sphere that we have chosen for our vocation. We should not narrow ourselves down to the one idea of life; we are gifted with many capabilities, and we are not filling the place in the world that we were designed to occupy unless we develop and then use, as far as possible, our various talents with the ultimate end in view of doing good.

We can only make mention of very few of the many subjects that, in our mind, might be pursued with profit and pleasure during our hours of recreation. These, of necessity, must vary with the tastes and capabilities of the individual, and, as no definite rule could be laid down in the realm of physical culture, neither can we in the mental; any and all, when properly used, may be, and, no doubt are, beneficial to a certain extent, but our aim should be to pursue those which yield the greatest amount of good.

Music, I consider an ideal recreation; it is always pleasurable and restful, refining in its influence, elevating in its character, and boundless in its possibilities, a knowledge of which might well be coveted by all.

Botany, with its health-producing rambles through wood and meadow, in search of rare plants, is a pastime worthy of consideration, instructive and interesting, with the double advantage of being both a physical and mental recreation.

Amateur photography is still another recreation that, at the present time, is already a great favorite—and justly so in cultivating a desire for art, in enabling us to see beauties in both art and nature, to which we were formerly blind, in adding still another ray of pleasure to our lives.

Electricity, with its ever-widening influence is a fruitful theme of thought, and especially interesting, in that it is being so extensively used in our profession.

Thus we might proceed, *ad infinitum*, but sufficient has already been said, and with again trying to impress upon the members of the profession the absolute necessity of making spare time, taking it from hours that may seem to be lost, and then using them in a manner that will recuperate mind and body, we gain immeasurably in health, happiness, and, in the end, financially as well.

Proceedings of Dental Societies.

ONTARIO DENTAL SOCIETY.

The ninth annual meeting was held in the Dental College Building, 93 College Street, Toronto, July 19-21, 1897.

The meeting was called to order at 3.15 p.m., President W. A. Brownlee in the chair.

The minutes of the eighth annual meeting were read and adopted. The President then appointed Drs. Hamilton and Webster as a committee to audit the books of the treasurer, and Drs. Kilmer, R. J. Husband and J. F. Adams as a Membership and Ethics Committee.

The following names were submitted to the Ethics Committee, and after a favorable report, were balloted for and accepted as members of the Society: W. F. Fear, Aylmer; J. E. Johnson, Hamilton; M. Cavanagh, Owen Sound; Allan Black, Kingston; D. C. Smith, Stouffville; M. W. Sparrow, Toronto; O. A. Marshall, Picton.

The treasurer, C. P. Lennox, read his report, showing a balance of \$64.75. The auditors having certified the report to be correct, on motion of Drs. Sparks and R. J. Husband, it was adopted.

The secretary's report was read by Secretary G. S. Martin and adopted.

Motion by Drs. Kilmer and R. J. Husband that an order be drawn on the treasurer for the amount of secretary's account, disbursements, \$17.06. Carried.

Election of officers for the year then took place, and resulted as follows: President, Dr. J. A. Marshall, Belleville; Vice-Pres., Dr. G. S. Martin, Toronto Junction; Sec., Dr. J. E. Johnston, Hamilton; Treas., Dr. C. P. Lennox, Toronto. Representatives on Executive—Districts No. 1, Dr. A. Black, Kingston; No. 2, Dr. O. A. Marshall, Picton; No. 3, Dr. A. J. Husband, Toronto; No.

4, Dr. F. Kilmer, St. Catharines ; No. 5, Dr. W. J. Fear, Aylmer ; No. 6, Dr. M. Cavanagh, Owen Sound ; No. 7, Dr. W. R. Hamilton, Stratford.

Moved by Drs. R. J. Husband and F. Kilmer that a vote of thanks be presented to Drs. Martin and J. F. Adams for attending New York State Dental and for report on same. Carried.

At the evening session Dr. J. E. Johnston, of Hamilton, read a paper on "Advertising." [Paper not yet received.—ED. D.D.J.]

Discussion was vigorously opened by Dr. Lennox, who deplored the prevalence of questionable methods of advertising, made use of by some of our men who claim to be very ethical, such as attending and joining a fashionable church or joining societies, etc.

Dr. R. J. Husband dwelt at some length on the possibility of the older members of the profession advising the young men of their acquaintance to avoid advertising of a kind that will separate them from their fellow dentists. Dr. Husband gave an instance from his own experience as a young man where an older practitioner, by timely advice, saved him from following a course that would have been disastrous.

Dr. Templeton, of Pittsburg, Pa., having been invited to address the meeting, he made some interesting remarks on the public appreciation of the status of dentistry, which brought Dr. C. N. Johnston, of Chicago, to his feet to protest that if the public do not appreciate the dentists and honor them, it is the fault of the dentists. If we were careful to act towards each other and towards the public as professional men should, we would be accorded as respectful treatment as we could desire. ~~Speaking for himself~~, he did not blush when he made his profession known to a new acquaintance. A great deal of good could be done in the way of encouraging young men who found it hard to make their way, and to whom the temptation to resort to advertising was very strong, if the older men of the profession would only take interest enough in them to point out the inevitable results of quackery.

Three three-minute papers were then read on the subject, "How can we make our Society meetings more attractive and profitable?" by Drs. A. H. Allen, Paisley ; W. Wunder, Toronto ; and W. A. Leggo, Ottawa.

It was suggested that our clinics should not all be placed at the end of the programme, but should be interspersed through the other matter, that we should meet in cooler weather, etc.

Dr. Brownlee then read the retiring President's address.

On Tuesday morning, Dr. M. Cavanagh read his paper, "Suitable recreations for dentists."

Dr. J. A. Marshall opened the discussion on Dr. Cavanagh's paper on "Recreations," by extending the essayist's reference to the origin of the word: "re," again, "creo," to make. The day

should be divided into three equal parts : one-third, rest ; one-third, work ; one-third, recreation. A barber will tell you that a razor needs rest to keep it in good working trim. The same is true of other inanimate things, and must, therefore, be true of the human frame, which is so complex in structure.

Dr. Melotte, of Ithaca, having been invited to the floor, took the occasion to compliment the essayist. Dr. Cavanagh, on his paper, and to add to the interest by some remarks on it in his own inimitable style. To him the subject of recreation was of vital interest. Many a time he had to leave his work and go apart to "allow the boiler to fill up." A scientist had told him that the nerve cells of the honey-bee were full and round in the morning, but after a day of toil the same cells were flat and shrunken. We get old when we lose the power of recreation or building up the broken down tissues.

Dr. J. B. Willmott, continuing the discussion, said that in no other profession had culture so great a money value as in dentistry, coming as we do in such close contact with cultured people for hours at a time. Time outside of office hours should be devoted to culture. Every man should have a hobby, so that when old age comes and a man has to retire from active work he will not be a burden to himself and to others.

Drs. Brownlee, Birmacombe, Clements, and others, added suggestions as to means of recreation, such as horticulture, music, walking, bicycling, horseback-riding, etc., after which Dr. Cavanagh closed the discussion on what had proved to be one of the best features of the programme.

Dr. C. N. Johnston's paper, "A plea for the preservation of the natural teeth," was then read.

Discussion opened by Dr. N. Pearson. Dr. H. T. Wood urged the necessity of removing deposits from teeth that come under our care, giving several instances where he had seen teeth very carefully filled, but no attempt had been made to remove the deposits that are so destructive to the gums and process.

Dr. J. G. Adams advised starting early. The teeth of all school children should be examined by a dental health inspector at stated periods, except those bringing a certificate from their family dentist to the effect that their teeth had been recently cared for.

Dr. J. B. Willmott took exception to Dr. C. N. Johnston's statement that a larger proportion of people in Ontario wear artificial teeth than among any other people he knew. After further discussion by Drs. Fear, Templeton, Sparks and Clements, Dr. C. N. Johnston closed discussion.

In afternoon, Dr. Melotte addressed the convention on "Crown and bridge work," illustrating his methods as he went along by models and practical work.

Discussion on Dr. Melotte's address was opened by Dr. A. J. Husband, Toronto.

In the absence of Dr. Croll, of Palmerston, his paper, "Dental jurisprudence," was read by Dr. J. B. Willmott.

Discussion opened by Dr. H. E. Eaton, Toronto.

A very interesting feature of the afternoon meeting was the conducting of a question drawer by Dr. J. B. Willmott.

At the evening meeting, Tuesday, some considerable discussion took place on the subject of next year's meeting.

Moved and seconded by Drs. Moyer and J. B. Willmott, that the next meeting be held on the 2nd, 3rd and 4th days of March, 1898, in the Dental College Building, Toronto, and that Dr. Black, of Chicago, Ill., be invited to be present and demonstrate his experiments with amalgams. Carried.

Moved by Dr. G. S. Martin, seconded by Dr. W. A. Brownlee, That we do now elect Dr. Melotte, of Ithaca, N.Y., and Dr. Templeton, of Pittsburg, Pa., honorary members of the Ontario Dental Society. Unanimously carried by standing vote.

Dr. E. H. Adams' paper was then read, "Diagnosis of lesions of the heart before administering anæsthetics."

Dr. Adams showed all the different appliances for testing the sounds of the heart.

Dr. Teskey opened the discussion in his usual masterly style, commending the paper.

The paper by Dr. Templeton, of Pittsburg, was read next and discussion opened by Dr. Clark.

On Wednesday morning a suitable patient not being forthcoming for Dr. C. N. Johnston's clinic on "Tin and gold filling," by request the doctor read a paper, "Some considerations in the preparation of approximal cavities in bicuspid and molars." The paper was very fully illustrated by diagrams showing the absolute necessity of thorough cutting away so that the point of contact does not approach the margin of cavity, also that the interproximal space be preserved carefully. That edges be properly bevelled, so as to avoid pounding the edges off in filling together.

Dr. C. N. Johnston's paper was voted one of the most valuable ever read before the Society, and a cordial vote of thanks was accorded to Dr. Johnston for its presentation.

On motion of Drs. Brownlee and Fear, all outstanding accounts were left with Executive Committee to settle.

The clinic of Dr. Melotte on "Gold plate" was then given in the College laboratory, also Dr. Capon's clinic, "The use of napkins in the mouth," and Dr. Brownlee's clinic, "Tempering instruments," brought the convention to a close.

THE BLOW AND BLUFF SOCIETY.

A meeting of the quacks and quack-imitators of the Dominion was held on the 1st of last April, for the purpose of organizing a society for the better education of its members in the science and art of dental blow and bluff. The room was crowded to suffocation, for although the full representation of thirteen—the unlucky number—was present, and the room was large enough for a hundred, the evil odor of the members was insufferable to the reporter, who had to engage a seat on a ladder outside at an open window. One dude, arrayed in patent-leathers and diamonds, was the object of reproach, as the majority considered that he was trying to put on airs, and the atmosphere was rank enough. He retired; and returning with his feet in calf, and displaying two pawn tickets, he was allowed to continue his contribution to the melodious surroundings. On motion, it was resolved to adopt a strong-voiced goose with the motto, "Blow and Bluff," as the crest of the society, and to select the 1st of April as the date of the annual meeting. The president delivered his annual address, in which he showed that nature made a mistake when teeth were invented; she showed she was ashamed of herself, because she hadn't the gall to show her teeth at birth, but she hid them away for seven months; and even when they erupted, they decayed, showing that she was sorry, and meant them to be extracted and replaced with artificial sets. What a great profession we are that we can beat nature all hollow. Her teeth decay, pain and cause blasphemy. Ours don't! With our dental squirts, our gas, our forceps and our stone teeth, we will revolutionize the mouths of the people of this Canada of ours. See how Chicago and New York go ahead! And why? Because, from Geo. Washington down, the people get their blarsted teeth out, and they aint afraid to bite a crow-bar. We must teach our people to bite crow-bars. We must clean out the human teeth, even if we have to clean out the human race. There never would have been sin in the world if it hadn't been for the human teeth. If Eve had had bare gums she couldn't have eaten the apple, and therefore she wouldn't have done it, and therefore there wouldn't have been no sin. Every time I get my forceps on a tooth, I think of Eve, and I do my level best to revenge her. There aint no use filling teeth, but of course we must putty them up if the ignorant public want it, and we can get their dollars. Gentlemen! (At this exclamation each member looked at his neighbor very much as if the president had called them "My Illustrious Lords"). The public have got teeth; the public have got dollars too. We are after both, and we mean to have them, and I urge you to spare no pains; I urge you to advertize in papers,

on platform, in pulpit. Run the church, if you can. Take up the collections. Teach a class. Blow! Blow!! Blow!!! Bluff! Bluff!! Bluff!!! At this magnificent peroration, the president imbibed a large glass of *whiskey blanc*, took out his upper and lower sets, waved them in the air and called for three cheers for Humbug, the guardian angel of the society. The whiskey-blanc was passed and re-passed, and for an hour the members forgot what they had met for, until the secretary rose to read his report. Steadying himself with one hand on an ink bottle, he huskily reported progress. The use of show-cases was increasing. They trapped the fools like fly-paper catches flies. It was true that there had been several sheriff sales, seizures and prosecutions of their number. The public press, too, had foolishly now and then given insertion to articles against the great principles of Dental Blow and Bluff, but members could counteract this by lots of advertising. The press prefers pay to principle. You can't buy new machinery with "principle." The press cannot pay the paper manufacturer with dental ethics. Gentlemen! You can tell dental lies by the column every day in the week in every paper in the Dominion if you just pay for them as advertising. He recommended the members to encourage discord among the ethical men. Get them to accuse one another of trickery and treachery. Sow seeds of dislike and jealousy and the society will get the profit. There would be a hard fight yet, as we understand that the Provincial societies meant to take active means to "educate the people," but we have the best chance, because people like "blow and bluff," and we can give them our stone teeth "away down below cost" (aside—this is bluff, we know). Didn't Burns say that the teeth were the hell of all inventions of nature. It was something like that. We are organized to wipe out this hell and give the people a new heaven of cheap stone teeth, and no family should have anything else. At this point the secretary lifted the ink-bottle, and mistaking it for a glass of whiskey-blanc, swallowed a dose, which greatly rejoiced his friends. He was immediately elected permanent secretary for the rest of his life, having made his mark. A member then arose after some difficulty and read a paper on "The Glorious Bird of Freedom," wherein he strained himself badly in showing that if some people defended the right to commit suicide, why not the right to get rid of their teeth. Let parents have the first teeth hauled out when they appear. The children will not want meat, candy or peanuts then, and we will be the consumers of our own great Manitoba and Ontario wheat. Let them gum it for twelve years.

Another member objected to this idea. He favored hauling the first teeth out and inserting sets for the kids as well as for their parents.

The essayist said the gentleman who just spoke was an idiot.

The ruffled member rose and begged to say that the essayist was a rascal.

The essayist called for more whiskey-blanc, and replied that he was proud of being called a rascal. He would not be as proud of being called an idiot. Idiots don't make dollars; rascals do.

The ruffled member apologized and said he overlooked that fact, and he wished the essayist to exchange the opprobrious epithet of idiot for that of rascal, which the essayist did, and then hands were shaken and drinks exchanged. As the rest of the members by this time were too drunk to rise, the president slipped under the table, the secretary fell over the ink bottle, the two quarrelsome members fell into each other's arms in a maudlin condition, and we slid down the ladder.

Abstracts.

Edited by G. S. MARTIN, D.D.S., L.D.S., Toronto Junction.

TEETH IN RELATION TO THE EAR, NOSE AND THROAT.—Gambati called attention to the importance of not neglecting the teeth in diseases in general and especially in those of the ear, nose and throat. Disease may affect the development and formation of the teeth. The reverse is also true, a carious tooth or alveolar abscess may develop symptoms that are thought to depend, by the patient, on trouble in the nose, ear and throat. The ear especially is frequently the seat of reflex disturbances that originate from the teeth, although the nose and throat are sometimes affected in this manner.—*Laryngoscope*, Mar., '97. *Pacific Stomatological Gazette*.

TOOTH EXTRACTION AND INFECTION.—When we consider that the mouth is such a center of infection, and that so many varieties of microbes, both pathogenic and non-pathogenic are found there, and the further fact that so many dentists never sterilize their extracting instruments, it is strange that there are so few serious cases from that cause. And yet Miller, in his book cites, about sixty, of which about half terminated fatally, septicæmia, pyæmia, or meningitis, being the usual fatal complication. One instance was that of a young and vigorous man who had a lower molar extracted. The wound became infected, either from the instrument or through auto-infection; septic fever supervened and he died in four days. The autopsy revealed a large abscess in the neck, a great quantity of fetid pus in the pleural cavities and in the pericardium. In the abscess there were found stræptococci and diplococci, resembling the salivary septicæmic organism which has been segregated and studied by Miller.—*Dental Practitioner*.

No later than ten years ago the number of reported deaths from chloroform alone was but a fraction less than half a thousand. Since that time, with its more extended use, the fatalities have greatly increased. Statistics of the fatalities from anæsthesia are hard to be obtained, but as near as can be determined the facts are as follows: It is estimated that chloroform kills one patient in every ten thousand; sulphuric etherine one in every twenty-six thousand, and nitrogen monoxide one in every one hundred and fifty thousand. And please mark the significance of this fact, viz: Forty per cent. of these deaths have occurred when the anæsthetic was given for minor operations, such as strabismus, tooth drawing, etc. Forty deaths then, of every hundred during operations, which operations in and of themselves, although attended by a temporary pain, have never been known to kill. In the light of these facts, is it romancing to say that the administration of any general anæsthetic is dangerous to the extent of being unjustifiable, when used for the performance of any operation in which the shock or danger from the anæsthetic will probably exceed that of the operation? It is not to be forgotten that although the patient may not change worlds while under anæsthesia, there frequently result life-long sequelæ which make the load of life a grievous burden.—*Archibald Dann, M.D., Dental Practitioner and Advertiser.*

WHAT OF CATAPHORESIS: IS IT PRACTICABLE, IS IT DESIRABLE?—These questions are asked almost daily. While we will not here attempt to answer these questions in detail, two or three things may be said. And first, a cataphoresis for the treatment of sensitive dentine or exposed tooth-pulps will not be successful in the hands of those ignorant of the properties of the very subtle agent used in this work: a very small per cent. of the profession, indeed, have given any attention or study to the subject of electricity, and are wholly incompetent to handle it with any definite results, and ought not to attempt its employment in the absence of a reasonable knowledge about it. The knowledge here indicated implies, of course, an acquaintance of the various instruments and appliances with which the agent is manipulated. To the second enquiry it may be replied, yes—in the hands of those competent to use it. From this it must not be inferred that the desired results can be obtained alike in all cases; there is an infinite variety in the susceptibility of different cases. This is true in regard to all methods of treatment, and of the action of all medical agents. That in the large proportion of cases of sensitive dentine, an entire reduction of that condition can be effected there is no doubt; but that in hands of the most skillful there will be occasional failures is equally certain. In many cases in which pulps are to be removed it serves an admirable purpose. In

several cases in which we have used this method for anæsthetizing the dental pulp for removal, it was in each an absolute success, but we do not accept that as prophetic of like results in all other cases. To the third query—Is it desirable?—yes, so far as it will accomplish the object sought. Anything is desirable that will allay acute sensitiveness of dentine when it is to be operated upon, and that will not be attended with disastrous results. Cataphoresis seems, in the hands of the intelligent and skillful, to be quite as effective as any other means hitherto used, and with less objectionable after-results than some other agents. In the removal of pulps by the use of cataphoresis, employing a due amount of care and skill, the liability to ill results is reduced to the minimum.—*Editorial in Dental Register.*

Tit Bits from the Editors.

What renders these local anæsthetic nostrums most censurable is that they are pretentiously advertised as harmless, when, from their composition, they are far otherwise than safe to use.—*International Dental Journal.*

Very often those in authority forget that they are the servants of the people, and the laws. Even dental laws are made for the protection of the people as a community, and not to be the excuse for manipulation for personal ends.—*Pacific Dental Journal.*

The investigations upon the coagulation theory clearly prove that a coagulant, such as carbolic acid, does diffuse through dentine, notwithstanding assertions made to the contrary, and “does not form an impenetrable coagulum at the artificial ends of the dentinal tribuli.”—*International Dental Journal.*

“The Code of Ethics” is the organic law of the dental profession. A dental journal which itself violates or encourages others to violate the code cannot be the “best journal which the resources of dentistry will permit.” It becomes at once an enemy to professional progress.—*Dental Cosmos.*

In inflammation of the gums, in case of stomatitis showing on the external plates of the gingivæ, passage with the ball of the finger will be found very useful. It presses the blood out of the distended capillaries, hurries the circulation in the sluggish blood vessels and gives tone to the whole local territory, re-establishing the nutrient currents, and promoting resolution of any exudate material.—*Dental Practitioner and Advertiser.*

The National Association of Dental Faculties has done more to raise the standard of education in one year than the Examiners' Association can ever do, because it is composed of men who are themselves experienced educators, who know what dental education is, and what it should be.—*Dental Practitioner and Advertiser*.

The practice of dentistry as usually conducted is very exhausting, and as followed in many instances, within a few years causes to a greater or less degree a breakdown of physical strength and energy. The confinement in an office, as we usually find it, of from nine to ten hours per day, is a great violation of health laws. Let there be less ambition to establish and conduct a large professional business. Let the office be, so far as light, heat, air and cleanliness, and all office conditions, as nearly perfect as possible, and have every equipment of the office so perfect in system and arrangement that it will occasion no annoyance to the dentist in any particular.—*The Dental Register*.

Referring to a fatal case following the use of chloroform, the *British Journal of Dental Science* remarks: "A verdict in accordance with the medical evidence was returned, the jury being of opinion that the chloroform was skilfully administered. The chloroform may have been skilfully administered, but it was given to a subject who on no account should have taken it. If gas had been given, the man would have been alive now in all probability. But gas is a trouble, and requires several visits if much is to be done. Chloroform on the other hand is handy, easily administered, requires no apparatus, and one sitting is sufficient, and so lives are sacrificed."—*British Journal of Dental Science*.

It is contended by some that the standards in the colleges are now more elevated; perhaps so, but the dental college man must be elevated yet much higher before the dental graduate can hope to be the peer of his medical confrere. The preliminary education exacted is insufficient, if we may judge by gross ignorance of the English language displayed in letters and essays from dentists which reach this office. The editor quotes "a few gems discovered among the papers of the last list of applicants" before the New Jersey Examining Board: Of the twenty-nine who applied for examination, twenty-six were college graduates. In presenting a full set of teeth invested, ready for soldering, the editor, who was present as a witness, says: "Not one of these twenty-nine men, twenty-six of whom were graduates, had invested their pieces so that there was any possibility with the facilities at hand, to properly heat up the piece prior to throwing the flame of the blowpipe upon the solder. All had from three to ten times as much investment as there should have been."—*Items of Interest*.

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

MILIARY TUBERCULOSIS OF THE MUCOUS MEMBRANE OF THE LIPS AND CHEEKS.—At a recent meeting of the Society of Dermatology and Syphilography of Paris, Dr. Thebierge showed a man, thirty years of age, with extensive tubercular lesions of the buccal mucous membrane, which developed almost simultaneously with tubercle of the lungs. The mucous membrane of the cheek was swollen in the form of a large patch, with a considerable number of miliary tubercles. Much the same condition was present on both lips, although the miliary tubercles were not so abundant as in the cheeks. No ulceration was present, and the sub-maxillary glands on both sides were enlarged.—*Journal of Brit. Dent. Assoc.*

OPERATIVE PROCEDURE FOR THE RELIEF OF OCCLUSION OF THE JAWS.—Dr. J. Ewing Mears, of Philadelphia, read a paper on this subject. Occlusion of the jaws may be caused by sloughing, cicatricial contraction, or spasm. Dr. Valentine Mott referred to a case of sloughing of the cheek accompanied by closure of the jaws. The spasmodic form is usually caused by delayed eruption of the molars, in which case the jaws should be forced apart and the molars extracted. In all cases of spasmodic closure the cause should be removed. The chronic or permanent form of closure of the jaws results from rheumatic and other diseases of the articulations, as for instance: the inflammation following the use of mercury; also following fracture of the neck of the condyle, which is the most frequent cause. The speaker presented a cast showing the absence of development of the lower jaw. In all cases a complete history of the case should be obtained. Deviation of the lower jaw to the affected side may aid in diagnosis. In all cases one should make a careful diagnosis in order to determine the best method of procedure for its relief. The following conclusions were drawn: 1. Jaw closure due to the presence of cicatricial tissue in the buccal spaces can be most efficiently relieved by the formation of a canal line by normal membrane by means of a ligature passed behind the cicatricial mass, reunion of the divided tissues and reformation of the nodular tissues not occurring after division when this canal has been formed. 2. Ankylosis of the temporomaxillary articulation producing jaw closure can be best relieved by removal of both coronoid and condyloid processes with the upper portion of the ramus, thus affording ample space for the formation of a freely movable false joint. The operation should be performed through the mouth, thus avoiding disfiguring cicatrices.—*Medical Review of Reviews, July 25th, '97.*

Dominion Dental Journal

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All Communications relating to the Business Department of the Journal must be addressed to DOMINION DENTAL JOURNAL, Room 97, Confederation Life Building, Toronto, Canada.

VOL. IX.

AUGUST, 1897.

NO. 8.

EDUCATING THE PUBLIC.

Medical, like dental humbug, owes its success to public ignorance. When men and women are every day deceived by departmental stores in the purchase of goods with which they have every reason to be familiar, it is no surprise that similar methods of advertising should entrap the laity in medicine and dentistry. The quack advertisers are sure to hand down their names as imposters. Some of them know this so well that a lingering sense of shame impels them to withhold them from the public press, and lie under such evasive titles as "New York Dental Parlors," "Boston Parlors," etc. New York and Boston should take it as an international compliment. We never knew a medical man who called his office "parlors" who was not a vulgar quack, or an ignoramus of the first water. These people are so tickled at their own surroundings, when they find themselves in possession of a few feet of carpet, that "office" is too small a name to use. And a dental chair, an engine, etc., are so very like the furnishings of a "parlor," are they not? The fact is, these men cannot be honest. The following extract is from an editorial in the *American Medico-Surgical Bulletin* :

"Medical instruction of the laity in the lay press is now being advocated by a number of correspondents in the *Journal of the American Medical Association*. The *Bulletin* heartily sympathizes with these writers, and believes that no greater work for the good

of the race could be accomplished than a society of medical men, each member of which would pledge himself to write and offer for publication a popular article every year. Such articles could be read in union meetings, discussed and amended, after which the society's endorsement should accompany them. No name should be signed, and only medical men should know who the authors are. The people in this way would be taught why medical men uphold a code of medical ethics, how to tell quacks from educated physicians, what their duties are to medical men, lessons in first aid to the injured, and the dangers that follow taking everybody's advice while the physician is in attendance. Who will start such a society? Once started, it will be of great advantage as a means of securing just medical legislation."

EDITORIAL NOTES.

AMONG the illuminations in Montreal during the Jubilee, one of our enterprising show-case advertisers had a lot of grinning artificial sets of teeth lit up by the electric light. He ought to get a medal.

DR. G. LENOX CURTIS has opened a Sanatorium for Oral and Facial diseases at No. 7 West 58th street, New York city, where patients can obtain daily personal attention. The doctor has provided rooms from \$15 to \$50 per week, including nurse.

A BARBER'S supply house in Toronto sells a small rubber-dam collar to be adapted to the neck in cutting the hair. It is intended to keep the loose hair from falling down the neck. It is also a very convenient adjunct for the dentist in the use of anæsthetics.

Isinglass glue "is good when the blood is prone to ebullitions and in bleeding of the gums." The leaves of black henbane mixed with gum ammoniac applied to the teeth will *make them drop out without pain.*" This should be tried by our "painless" advertisers. The fresh root of the plaintain "scraped and put into the ear cures the toothache like a charm." "Sugar is so far from rotting the teeth that a great authority used nothing else but loaf sugar to keep them clean and white for many years, for he was well aware of the antiseptic power of this substance, inasmuch as it would preserve flowers, fruits, roots, flesh, etc., from corruption a very long time." The sage plant "used as a gargle, is good to fasten loose teeth from scurvy in the gums"—a hint to us in pyorrhœa alveolaris. References are made to decoctions and infusions of numerous herbs, which are quoted as equally beneficial for suppression of the menses, "fluxes of all kinds," "cold, disorders of the womb," toothache and gravel!

WILL the Secretaries of the Provincial Societies, outside of Ontario and Quebec, greatly oblige us by sending as soon as possible the names and addresses of all officials, and the date and place of next Provincial meeting, whether for the election of new Boards or not.

LOOKING over the aphorisms of Hippocrates, who, we all know, was born at Cos in Greece, four hundred and fifty years before Christ, and lived to the age of 109, we noticed some mention of the teeth which may interest our readers. Writing of infants, he remarks, "When they begin to breed teeth, there happens itchings and prickings of the gums, fevers, convulsions, fluxes of the belly (meaning, no doubt, dysentery), especially when they bring forth their dog-teeth (canines). These things happen to those that are very gross, fat and costive of body." In the 53 aphorism, section 4, he evidently refers to the collection of sordes and salivary calculus as a local consequence of constitutional disease: "They have fierce and vehement fevers that have a tough and vicious moisture grown about their teeth."

AN erratic dentist, who occasionally honors Montreal by a professional tour of a few months, in the intervals of waiting for the more congenial opening on the stage, is very absent-minded. His mind is always pre-occupied with the writings of the dramatists, and his conversation is interlarded with quotations from various play-wrights. It was not uncommon for him to suspend an operation, and while the rubber dam was in place, hurl forth lengthy extracts from Shakespeare, until re-called to his work. One day he was taking an impression in compound for a partial upper set, and instructing the patient not to disturb it, he went into his laboratory, where he found a friend who proposed that they should go out and "see a man." Forgetting all about the patient out they went. The patient got a book, and though he thought it was rather a long wait, in his innocence of the business he decided to keep cool, so he sat in the chair for two hours, with the impression cup protruding from his mouth. Our dramatic genius was in the middle of a game of poker when he suddenly thought of the patient, and going to the telephone he rang up his office. "Is that you, Jack? I left old ——— in the chair with an impression in his mouth; tell him it is a new idea; one of my own inventions; only known in my parlors, and you might take it out, Jack, and tell him to call in the morning."

ONE of our valued friends in England recently paid us a compliment, which, we hope, we may mention without the odium of self-approbation. Our chief object in quoting it is to emphasize the fact, that the ethical policy in the conduct of dental journalism

in Canada, must count in the respect entertained for the profession, in spite of the vigorous efforts of the gutter-practitioners. "I have for many years," writes our friend, "regularly received your journal; in fact, from the birth of the old *Canada Journal of Dental Science*, and have followed with great interest the unswerving fidelity to the high standard of ethical conduct and education advocated by you at the beginning. I would not impute any reason for the neglect of most of your contemporaries in this direction, as I believe the editors, as a rule, enjoy freedom of criticism; but I venture the statement, that putting them all together, for the last twenty-five years, and making comparison of editorial policy, they have not displayed either the boldness or the persistence in attacking or exposing dereliction from professional ethics, which has characterized the *Canada Journal of Dental Science*, and its successor, the DOMINION DENTAL JOURNAL. Here in England we can appreciate your steady allegiance to the higher and more professional standard and the wisdom of refusing recognition where ethics are abused. It is the only safe way. Ethical scientific organizations are not moral or philanthropic missions. It is safer to force a quack absolutely on his knees, than for ethical men to go on their knees to him, as an inducement to become ethical. The British Dental Association and the General Medical Council co-operate in precisely the same direction, and in spite of the organized efforts of unregistered dentists, uniting in their force all the discordant elements, we have come out signally successful, and the association has not failed in England in any prosecution. It affords me much pleasure to witness in your journal the high tone of the standard to which you aspire. There will always be iconoclasts to drag it down, and only unceasing contention will keep it up. Everything in Canada is now of special interest to "the Mother Country," as you Canadians like to call England, and I am sure we your fellow-practitioners, who are as well fellow-Britons watch with satisfaction the sturdy determination, as shown in the Dominion Confederacy, to make the profession in Canada respected and in every way as reputable as the sister professions."

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Dominion Dental Journal

VOL. IX.

TORONTO, SEPTEMBER, 1897.

No. 9.

Original Communications

RESECTION AND REPRODUCTION OF THE MAXILLÆ.*

By G. LENOX CURTIS, M.D., NEW YORK.

Formerly Professor of Oral and Facial Surgery, New York Dental School and Instructor
in the New York Post Graduate Medical School and Hospital.

The purpose of this paper is to show the profession the importance of special study and instruction in oral and facial diseases, and that these are worthy of the same consideration as is given to any of the fully recognized specialities in medicine. Until they do appear in the curriculum of the medical school, the faculty will not have done its duty toward the student. The field covered by the general surgeon is altogether too great for a careful consideration of any part where such minuteness is required to save and assist nature in doing her work. The surgeon most capable of successful teaching in this line, is he who has been a thorough and conservative dentist.

Like produces like ; this applies to every department in nature. The periosteum, under favorable conditions, will reproduce the substance it covered. That of the ramus of the jaw will only make the thin lamina of bone which nature has originally placed there, while that of the malar and the body of the jaw reproduces a dense structure differing materially in texture.

If the function of a part be permanently lost, reproduction is not a necessity, nature supplying only that part which is required. If

* Read before the American Medical Association at Philadelphia, June, 1897.

the teeth have been extracted with a view to remaining out, the portion of the jaw which is required to nourish them is not reproduced, but where the teeth are replaced and retained, all, or sufficient, of the bone is reproduced and reattaches them to the jaw. Such I have seen in active use for years.

The only condition I can ascribe for the removal of the periosteum is where it is attacked by disease, such as cancer, and the entire structure destroyed. When the bone alone is destroyed, as in necrosis, cystic tumors, or from pressure by resistance of a growth, as tumor of the antrum, I see not the slightest necessity for removing this natural sheath, but on the contrary every reason for retaining it. I have seen Billroth, Von Borgmann, Agnew, Ashhurst, Garretson, and other great surgeons resect the jaw, but they invariably employed Huyfelder's, Fergusson's or Landenbeck's method, except in necrosis where but small sections were involved. Liston, Tait, Barton, Mütter and Cross also followed on these lines. But what can we say for the subject? Partially or wholly jawless, maimed and disfigured for life, a repulsive and pitiable object to others and a shrinking annoyance to himself. Is it not time to call a halt and look this matter squarely in the face?

I do not censure the surgeon whose opportunities to acquire knowledge have been dwarfed by the oversight of his teachers.

My method to obtain the best results in the preservation of the contour of the jaw, is by retaining the necrosed bone in position until the periosteum has been so strengthened by the reproduction as to allow nature's outlines to be maintained, employing it as an inter-osseous splint. Where it is necessary to remove the bone, I retain the contour of the face by gauze packing and change from time to time until the bone is sufficiently reproduced to resume its shape. This requires frequent dressing so that the amount of pus may be kept at the minimum. The teeth are retained in position by means of inter-dental splints or ligatures. Where the teeth are lost, I place other teeth in the opening when the wound is nearly closed, maintaining them by artificial support and allowing the bone to form around them. Where the destruction of the bone has been great and the periosteum too weak to retain the jaw in position during the process of reproduction, I use an inter-dental splint (as employed by Liston over fifty years ago) in which the upper and lower teeth properly occlude. By hastening slowly, the danger of wounding the dental nerve is materially lessened.

I was once asked to assist a general surgeon to remove one-half of the inferior maxilla, he claiming it to be Sarcomotis. I saw nothing but an enlargement of the sub-maxillary gland due to the septic influence of a tooth-pulp. I labored with him to save the man's jaw and show the error he was falling into. He defiantly replied, "I have said that it is a cancer of the jaw and must be taken out,

and I am going to do it." And so indeed he did, thus maintaining his wisdom with the patient.

The bone he removed was as perfect as nature made it. This is but one of the many terrible examples of what results from retaining old methods.

Scarce can we read a text-book in which is not found methods on treatment of facial diseases in vogue half a century ago.

In 1886 I operated on a young woman, aged 23, with the following history. Four years previous, after suffering much pain in the face, which was swollen, a fistula appeared in the lower jaw which was diagnosed as being from an abscessed tooth. The gums around the tooth were swollen and inflamed, the molars and second bicuspid were extracted and pus continued to flow. Her health rapidly diminished, menses ceased, and had not returned although constantly under medical and surgical treatment.

Examination revealed the emaciated condition of the patient. She was suffering from blood poisoning, was highly nervous and hysterical, had no desire for food and had lost the sympathy of her doctors and family. In the left inferior maxilla where the tooth had been extracted, there were granulations. A boggy condition of the mucous membrane extended all along that side of the jaw. Over the ramus it was particularly inflamed. The probe readily passed beneath the periosteum and far up along the ramus. The patient was then too sick for an operation with a view to best results. The wound was cleansed daily to lessen the amount of pus, and for one month the patient was placed under most rigid restorative treatment with good results. I found that under the local stimulating treatment, bone had been sufficiently reproduced to strengthen the periosteum so that when I removed the dead jaw the contour was preserved. The cause of the trouble I found to be a wisdom tooth lying transversely at the neck of the jaw immediately under the condyle. This along with the granulations and debris was removed. The wound was packed continually until healthy granulations filled in the periosteum; the jaw, minus the teeth, was reproduced with all its usefulness. Complete restoration to health and a gain of twenty pounds in weight followed this work. The nerves and vessels in the jaw were not injured and no paralysis resulted.

Before my class at the New York Post Graduate Medical School and Hospital on March 25, 1893, I operated on a lad fifteen years of age who gave the following history:

Three years before, while at play he ran against a lamp post, striking the left side of his face and bruising it severely. A year later there appeared on the face, over the molar bone, a hard lump which continued to increase until it was the size of a hen's egg, preventing the boy from seeing with that eye objects on the ground

near by, without bending his head. He had not realized any special pain or discomfort from the tumor. Thinking the trouble arose from the abscessed teeth, his dentist extracted the upper left first bicuspid, which showed no evidence of being diseased. I diagnosed an osseous tumor of the antrum, and found that the malar and superior maxillary bones were completely destroyed by the direct pressure against them, only the periosteum remaining. Not only was the tumor directed outward, but downward, depressing the roof of the mouth and extending beyond the alveolar process against the buccinator muscle. An incision was made through the periosteum encircling the teeth, as seen in the specimen here presented, in which the tumor and teeth are attached, and it will be noticed that only a small part of the alveolar process remained intact. This with the teeth was removed, the entire side of the face falling into the cavity made by their absence, so completely was the malar and the superior maxillary bones destroyed. The inferior orbital ridge and zygoma only resisting the pressure of the tumor. A profuse hemorrhage followed its removal, but was readily checked by hot water. The wound was packed with aristol and gauze, and the contour of the face secured. The periosteum united with anures. Through this opening the wound was dressed until the shape of the face was permanently restored. Time of operation twenty-five minutes.

The following day there was considerable œdema which readily subsided. From day to day the dressing was changed until the periosteum could support itself, and in two weeks the case was dismissed from the hospital. The antrum was douched daily until restoration was complete. An artificial denture was made to replace those lost, to give the normal fullness to the mouth. In this operation there was no external wound, consequently no necessity for ligature and no scarring of the face which would necessarily follow had the operation been done on the lines drawn in general surgery. The wound completely healed in six weeks with no deformity of the face. I have seen the case from time to time and in every way it is eminently satisfactory.

On Feb. 3, '93, I operated on a gentleman 73 years of age who, up to the year prior to then, was in robust health never needing a physician in forty years. He stated that he applied to a dentist to have the left superior wisdom tooth, which was loose, removed, it having elongated, owing to the loss of its antagonist. As the dentist was using the forceps, the patient noticed they were covered with blood, but before he could rebel against this outrage, a tooth had been extracted, which was found firmly attached and resistant. He saw that a sound and healthy tooth had been taken out by mistake. The dentist then removed the loose tooth with slight inconvenience. The wound made by the extraction of the teeth

did not heal, and the gums around it became swollen and inflamed, the remaining teeth on that side soon were loose and sore. In three weeks they were so troublesome that with his fingers he removed the first molar. He then noticed an opening into the antrum and that granulations protruded.

About two months after, the bicuspid was extracted in a similar manner, and in two weeks later the cuspid. The entire side of the jaw became very painful; the patient was unable to sleep or take proper nourishment and rapidly diminished in strength and health, until at this time, Feb. 3, he was extremely emaciated, not having taken solid food for weeks and for the past three days only water, because of the great pain in the effort to swallow.

Examination revealed a deplorable condition of affairs; the entire left half of the jaw and cheek were infiltrated. The microscope showed epithelioma. The characteristic cancerous odor prevailed. An incision was made anterior to the right cuspid and extended back and across the soft palate to the condyle, down the ramus, and forward along the buccal surface of the jaw to cuspid upward and forward, until all the mucous membrane to the median line was removed. The entire enclosed area was then resected, leaving only the external portion of the malar bone and the orbital ridge of the superior maxillary in position. In operating, I removed a portion of the anterior lobe of the parotid gland, along with the duct. The hemorrhage was profuse, but was completely checked in a minute by hot water. The wound was dried, packed with aristol and gauze, no ligatures being employed. Time of operation, twenty minutes. The patient made a splendid recovery, slept comfortably much of that night and had but slight rise of temperature. There was some oedema of the face which lasted three days. Patient received most nourishing diet and was sitting up in three days. On the seventh day following the operation, the case was for the first time dressed, no untoward symptoms arising in the meantime. The packing was perfectly dried and scarcely blood-stained; not a drop of pus was present. The wound was repacked, but loosely, and redressed every third day without a single complication. On Feb. 17th, patient was dismissed from the hospital with instruction to douche the wound frequently. The wound made rapid progress in healing, and on the thirteenth day of March, it had almost completely closed, leaving but a single opening into the antrum, so that on the 30th day of March, the impression for an artificial denture was taken.

The patient's health had wonderfully improved, he being free from pain and slept soundly. He was able to resume the management of his affairs and was again in good health, continuing so until August, '94, when he contracted pneumonia from which he died. Two months prior to his death, the cancerous granulations

appeared in the old wound. There was no disfigurement of the face from the operation, and the only inconvenience was the loss of his natural teeth, as he was unable to wear the artificial substitute.

A lad 13 years of age was brought to me in March, 1893. Giving a history of complete nasal stenosis of some years' standing, a clear history of adenoids. He had been under medical care for years, the physicians failing to recognize the cause of his trouble. The discharge of pus from the mouth and nose caused the physician to refer the patient to a general surgeon, who in turn, referred the case to me, with the statement to the parents, that he believed the preservation of the jaws was preferable to their removal which would result in a hideous disfigurement from an operation at his hands. I have never operated on a more lifeless and waxy looking creature. The odor from his breath and body, which was steeped in pus, was most sickening. There was no time to lose. Desperate chances had to be taken to save his life. All of the upper oral and bicuspid teeth were so loose that but for the periosteal attachment they would have dropped out. There were large sinuses under the lips and the roof of the mouth through which pus exuded. The periosteum of the roof of the mouth was so filled with pus that it bagged. All of the bone of the superior maxillæ, anterior to the first molar including the palatal plate was necrosed, likewise the palatal bones and the inferior turbinates. The adenoids completely filled the nares and crowded into the antrum of Highmore, breaking down the walls, and advanced until the process of destruction was complete.

Pus oozed from all the loose teeth and through the sinuses, nose, mouth and out up through the lachrymal ducts into the eyes. The throat was so plugged up that breathing was very difficult and ptyalism extreme. At this operation I removed what I could of the adenoids, opening the nasal passage and partially cleaning the antrums, which was done with great difficulty, as the boy took chloroform badly, owing to extreme anæmia; the loss of blood was not so very great.

The loose teeth were supported by ligatures until held by the new bone.

The patient made very good recovery from the operation, and in forty-eight hours the improvement was noticeable. The wounds were dressed daily and through the sinuses douched every hour. Recovery was so rapid that in four weeks I was again able to operate, this time removing all of the necrosed bone and thoroughly curetting the antrums.

The boy made rapid strides toward recovery, and by May 1st I was able to perform the final operation, when I removed the remaining adenoids. Here occurred a profuse hemorrhage, but with per-oxide and hot water it was quickly checked.

Most stimulating tonics and nourishing diet were prescribed from this on. Recovery was marvellous, so that in two weeks the patient was able to walk to my office for treatment. By June 1st, he was dismissed cured, having gained 40 lbs. in weight, having regained his normal color, good appetite and usual strength. He then went to his country home. I saw him again in one year. There was no occasion for treatment, with the exception of a slight imperfection in the alveolar process, where there had been a deep sinus, the gums did not unite and a few adenoids had put in an appearance. The only additional opening through which I operated, was made where I extracted the left superior molar, this being so badly diseased I considered it well out, and through which I was better able to reach the antrum.

To facilitate cleansing of the wound and destruction of the pus, let me recommend to you Electrozone, the best of all agents I have found for this purpose. Under its use the pus melts away like the dew before the morning sun.

I have done many cases similar to these stated and without deformity in any instance. All of them are accompanied by blood-poisoning and have usually been treated for rheumatism, malaria and typhoid fever for months and even years, before the error is discovered.

This conservative method is not conducive to a fine collection of pathological specimens, as a recovery of a part without blemish leaves only the history of the case and the statement of the patient as proof of the malady.

The student should have a chance to see in practice the methods he wishes to adopt. In this city, only recently, at our great University no end of strife resulted from a determined and successful effort of the dental department to make a place in the hospital for their oral surgeon, with equal right to operate. This was the beginning of the end when all such institutions must of necessity adopt the same course. Why confine this work to so-called major operations when they can be simplified to the minor class by annexing such men skilled in dentistry and medicine alike to the medical faculty?

Let us hope that the controllers of such faculties will appreciate that "Knowledge is power," and that new methods are a necessity.

7 West Fifty-Eighth Street.

TREATMENT OF PULPLESS TEETH.*

By A. J. HUSBAND, L.D.S., Toronto.

For convenience of description, we will divide pulpless teeth into those presenting with pulps recently dentalized by medication; second, with putrescent pulps; third, with acute alveolar abscess without fistula; fourth, with fistulous opening; and fifth, preparatory to inserting pin crowns.

In the first case we will suppose the pulp dectalized but not removed. Adjust the rubber dam after cutting away the decalcified dentine, make a free opening into the pulp chamber, not hesitating to sacrifice good tooth substance in order to secure light and thoroughness of manipulation. Endeavor to remove the pulp by inserting a barbed brooch well up the root, twisting and withdrawing it with very often the pulp attached. In refractory cases I find that with the Evan's root-drier inserted hot the pulp will adhere to it and come away easily. Having the pulp removed, check the hæmorrhage, if any, by injecting into the canals pyrozone; for this purpose use the minim syringe. Whether there is any bleeding or not, I wash out with pyrozone, followed by sodium-peroxide, this last for the purpose of saponifying any remains which may be left; wash this out with applications of water and dry thoroughly with Evan's drier or hot air or both. Wipe out the roots with oil of cinnamon on a fine brooch, fill with chlora-percha, using one or more gutta-percha cones to displace surplus liquid. In this class of teeth I deem immediate filling the best.

Second: Putrescent pulps. Secure all the cleanliness possible by removing softened dentine and washing out the cavity with tepid water before adjusting the dam. After the dam is applied swab out the cavity with pyrozone and evaporate moisture with hot air, secure free opening into canals, reaming them out if the margins are soft; wash out thoroughly with repeated applications of pyrozone. In washing the canals with H_2O great care must be exercised not to use too much at a time. I use the minim syringe and inject a very small drop at a time, wiping out and applying repeatedly until effervescence ceases, followed by sodium-peroxide; wipe out canals with cotton wound round a fine brooch until all discoloration ceases. Again use hot air or Evan's drier, followed by an application of oil of cinnamon, and fill as in the previous case.

If it is impossible to check the discharge I fill the root with cotton

*Read before Toronto Dental Society May 12th, 1897.

saturated with pyrozone and mercury bichloride 1 in 1,000 equal parts and renew every 2 or 3 days until discharges cease.

Third: Acute alveolar abscess without fistula. These cases usually present with swollen faces and extreme soreness of the teeth. My first treatment is simply to secure an opening into the pulp chamber. I dismiss the patient then until soreness disappears, when I can operate comfortably for both of us. I know there is a great outcry against this procedure, but I follow it nevertheless, deeming the treatment equally efficacious and considerably more human than any other that I know. After soreness has disappeared I treat as in former cases.

Fifth: Cases with fistulous opening are treated by opening fully into canals and cleaning them as well as can be with brooches and then forcing pyrozone through the fistula with a hypodermic syringe, using a washer of gutta-percha to dam up the canal to prevent return of liquid. This is followed by aromatic-sulphuric acid injected in the same manner and the roots dried and filled at once with chlora-percha and gutta-percha points as formerly. In some cases where it is deemed expedient to open into the canal from the tooth, I follow the track of the fistula with bars, scrape the end of the root, or as I think better still, extract and replant.

Fifth: Before inserting pins for any purpose after treating the root as in the former case I fill the apex with tin to prevent cement from being crowded through.

THE CHOICE OF A FILLING MATERIAL.*

By DR. DAVIS, London, Ont.

In the consideration of this stereotyped subject we shall not attempt the elucidation of anything original or new, but will endeavor very briefly to give a few personal impressions formed regarding the various filling materials, after a number of years of active practice. We shall not strive to treat of anything other than that demanded by our subject; we shall not speak of the great advances which have been made in the filling of teeth for two reasons: first, that our text does not require it; and, in the second place, in our humble opinion we have not progressed as a profession as we should have done in this all-important branch of our most noble calling. It is a deplorable fact that prejudice, in many cases, is more powerful in the influence exerted in our judgment, in the filling of teeth, than the great thought of tooth-conservation. I must fill this tooth with this or that material,

* Read at London Dental Society.

because I must demonstrate by my acts, that I am in favor of the specific class of filling materials as advocated and adopted by me. Thus it is that teeth of poor structure, of frail wall's with decay encroaching on or near the pulp, is filled with a material totally incompatible with the tooth substance and its surroundings. Another consideration which largely influences the operation is, the amount of the remuneration to be received for the performance of the operation. "Doctor, what is the best filling to be put in that tooth?" is the question propounded by hundreds of patients, nay thousands, daily, and the skilled dentist mentally calculates the size of the questioner's pocket-book before replying. If perchance the carriage and coachman await the patient's exit from the offices, the reply invariably is: "Oh, that tooth must be filled with gold;" on the contrary, if the patient shows by the mud on his shoes and his general appearance that he has "footed it," and that "filthy lucre," with him is very scarce, the reply is: "Oh, amalgam, or some cheap filling will do to fill that tooth." Need we say that this is all wrong; we believe that every tooth more or less shows indications of the proper material with which it should be filled, and in every case the dentist should be sole judge of the filling materials to be used and he should honestly insert that material which he conscientiously believes to be the proper filling for that particular tooth. What have we seen, not once, but hundreds of times? that a tooth filled with gold in the mouth of a rich man is decayed cervical wall and generally shows signs of disintegration and demoralization, while a tooth similarly decalcified, and, under analogous circumstances, in the mouth of a poor man, which has been filled with an amalgam made from silver coin or a similar-made alloy filled up with a rubber file, rudely inserted, in an improperly prepared cavity and imperfectly protected from the fluids of the mouth during the operation, remains in as perfect a condition as the day the filling was inserted. Oh, for the day to speedily come when the dentist will be paid for his manipulative skill, his knowledge of Dental Pathology and Therapeutics; and the time spent in the perfecting of himself in his profession—rather than for the difference in cost of the filling material. The idea of cost is fostered and nourished by all the several grades of the profession, from the dentist of such standing and such repute, that he does not even need a silver plate to inform us as to the whereabouts of his office, down to the abominable, miserable, damnable quacks who make you feel sorry for your calling, when you see their glass cases at their door, on which is ostentatiously displayed the information that "Extraction 25cts.; is malgam fillings, 50cts., while gold only costs 75cts a cavity." Let us here digress for a moment, to correct an error which exists, that vulcanite indentures and amalgam are responsible for the

deterioration of our profession. We have invariably noticed that the silver-plated glass cases at the doors of these who have the title of D.D.S. and L.D.S. always contain choice specimens of gold fillings inserted in the most inaccessible cavities of decay, and also magnificent full dentures on the finest of gold plate. We must go deeper than this for the cause of quacking; we must admit that the majority of quacks are incompetent men, yet a hasty desire to obtain a good practice, and at the same time get rich, which actuates the mind of many a young graduate, is responsible for the increase in the vast army of those despicable creatures of whom it is a disgrace to that noble bird a duck to call quacks. We believe that students should be taught that once a quack, always a quack. How often have we been told by one of these young men: "Oh, I am just quacking until I get a practice." We have never yet seen one who has been able to shake himself from his environments and become eventually a professional gentleman. In addition to this we believe that the reputable members of the profession should deal differently with these creatures. A man can be at times too much of a gentleman. We do not put on a full dress suit of clothes to clean out a sewer, nor should we stand on what is professional and gentlemanly etiquette in dealing with these outcasts of a noble calling. To be gentlemanly with them is the most flagrant case of casting pearls before swine. But to return to our subject, what should be the great desideratum in the choice of a filling material? We unquestionably answer, "Tooth Conservation." This comprehends everything; manipulative skill being conceded, we say, that a filling, even without beauty, that will maintain the tooth structure by being compatible with, that will save the pulp from irritation through being non-conducting and non-irritating, is a better filling to insert into a particular tooth, even though it has to be renewed in the course of every few years, than a filling which has every appearance of being beautiful, has great resisting power which, in itself, resists completely the action of the fluids of the mouth and the power exerted on it by mastication, and while it *per se* is as good in every way as the day it was inserted, it stands as the Emperor William did when he entered Paris at the close of the Franco-Prussian war, to see the ruins he had created.

This is no fictitious case, we have seen hundreds of cases of this kind. Beautiful fillings, nicely condensed, finely polished, exquisitely contoured standing intact and beautiful, while the surroundings are those of demoralization, disintegration, ruin, decay, and death. Prejudice, remuneration and beauty in these cases were the governing considerations in the choice of a filling material. The operator has received the money, the patient a short period of beauty, while the poor tooth, to speak vulgarly, "has got it in the

neck." This is not only vulgar but true, as it is generally that part of the tooth anatomy that shows first the mischief created by the operator's greed for money, his desire to have people to be his patients: "Who put that beautiful filling in for you?" and also the patient's folly in the desire to have a filling that presents a fine appearance, as if this was only the great desideratum. Let us not be misunderstood, not be misinterpreted; we believe that in many cases gold is one of the best, if not best, materials to fill teeth. In teeth of hard, dense structure, in which the cavity of decay does not impinge on the cervical wall of the tooth, gold can properly and advantageously be used as a filling material. We have seen gold fillings inserted in such cavities, and they stand as monuments to the manipulative skill and wisdom of the practitioner who so successfully inserted them. In these cases we have consideration of the teeth, also beautiful fillings, hence gold was the proper material to be inserted in those and similar cases. Now, in teeth in which we cannot (in view of the fact that we wish to conserve or preserve the teeth) introduce gold,—what materials are at our command? We will not here speak of an ideal filling material, we have no such; we know what its qualities should be, such as regards color, non-conductive, non-irritating, easy of manipulation, etc., but seeing that, like the ideal man, it is not here, but in heaven, we shall deal with what we have.

The first is amalgam—let us first define what an amalgam is. We cannot give a better definition than that of *Prof. Flagg's*, viz.: "One or more metals held in combination with mercury by the mercury form an 'amalgam'!" This abused metal was born under most unfavorable circumstances, in fact, in the home of quackery; yet, in spite of its inauspicious birth it has risen above its primitive surroundings and become a respectable and most worthy member of the noble family of desirable filling materials. No filling material has undergone such tests as the descried material. Those who used it were threatened with dental excommunication, and some members of the profession who were convinced of its utility as a conservator of tooth material were formally excommunicated from the American Society of Dentists, for their temerity in using, and also advocating its use to others. These pioneers in dental advancements found that amalgam made from dental alloy unscientifically compounded, rudely and improperly introduced into cavities of decay, imperfectly prepared, "saved the tooth." Thus it was that many a tooth remained in the mouth of the patient to do excellent service for years, instead of being rudely consigned to the dental cuspidor. If this were the result in the past, what should be, and we say is, accomplished with amalgam to-day, when it is prepared on scientific principles when it is accurately tested, and when it is properly inserted into

the cavity. True, it has its defects as we said before, no filling material is perfect, notably, its color, yet it is better, we opine, to have a badly discolored tooth in the mouth than no tooth at all. Far a broken down tooth, if poor structure, with frail walls filled with amalgam. With this, we shall remember that the amalgam used shall be such that the necessity of the case demands submarine facing, front tooth or contour. Another desirable filling is gutta-percha; this material has suffered in comparison with other filling materials, on account of defective manipulation. It is not our intention to speak of intermediate fillings, or those that are used to live cavities, hence we shall not mention this, that in large buccal cavities, having frail walls, gutta-percha should be the filling material; we remark in this connection, that the gutta-percha should be properly warmed and properly introduced, using for these purposes a gutta-percha warmer and instruments specially designed for the exclusive introduction of these fillings. We could go further and speak of zinc-phosphate, oxy-phosphate, oxy-sulphate and oxy-chloride of zinc and numerous other materials, yet we surmise that we have subserved our purpose, and end our paper with the saying, that tooth conservation should be the first consideration in the choice of a filling material, qualifying this statement by the remark, that if a tooth can be saved equally well with a filling that presents a beautiful appearance as with one that does not, the preference should be given to beauty, otherwise the first consideration—tooth conservation should invariably govern.

PRACTICAL THINGS WITH ILLUSTRATIONS.*

By PROF. J. G. TEMPLETON, Pittsburg, Pa.

In your programme, I see that one of the subjects is "Popular Dental Education." Now there are so many ways to educate people, and we obtain our education through so many different channels, that we have thought to suggest two things as being worthy of particular attention by our profession at the present time. They are, first, a much better preliminary education as a qualification for entering our profession; and, second, "*The suppression of the horrible in dentistry.*"

However, I suppose that the meaning of the phrase, "popular dental education," has reference to the laity, so to speak, or the people at large. As it is well known to us that there is scarcely

* Read Before Ontario Dental Society.

anything with which they have more to do, and yet about which they possess so little correct knowledge. Now in reference to the best method of disseminating the proper information, it has long been in the mind of the writer that the best method for the diffusion of correct ideas concerning the duties and operations of the dentist, would be carefully prepared lectures delivered before all our teachers' associations, supplemented by giving the same before the advanced classes in all our schools.

THE MAKING OF ARTIFICIAL DENTURES A FINE ART.

Yes, so it is. But when we go among the people and see the horrible imitations called artificial teeth in use by the people, we are inclined to think that the fine art part of what we see is quite a joke. Hence the conclusion, that the suppression of the horrible is greatly needed. It is no honor to us, that in this age of progress in the arts and sciences, so many evidences of the low standard of art in prosthetic dentistry should be seen everywhere we go. Yes, *false teeth* everywhere; they grin at us in the street, at church, in the theatre, everywhere, like a horrible nightmare, while the poor, unsuspecting victim seems to enjoy their hideousness. No wonder artificial teeth can be had for such a low compensation; they all look alike—like a job-lot, for this reason educated people have a perfect horror of them and feel robbed if they have to pay anything for them. One great defect of many sets of teeth, as we see them in use, is their youthful appearance; they look as if they had been borrowed from some younger person. The dental artist, like the sculptor and portrait painter, has the artist's license to make his subject look a little younger and, if possible, more beautiful; but if he should err by carrying this too far, he then produces a caricature and the result is just the opposite of what he hoped to accomplish, and from what we often see, we are very often inclined to think that many dentists must be color blind or else we would not see so many sets of artificial teeth the color of well watered skim-milk. The remedy is, educate the people æsthetically.

TO KEEP INSTRUMENTS NICELY POLISHED.

Burnishers give better results when new than when tarnished, and it is essential to keep them finely polished; in fact, it is desirable to keep all instruments polished. An efficient device for polishing can be made by fastening a piece of sole leather on a block of wood of suitable size and placing a little diamantine powder on this surface. Diamantine is used by jewelers and can be obtained from them or from their supply houses. Diamantine is nothing more nor less than oxide of tin, and can be obtained from a wholesale drug house for about sixty cents a pound.

TO MAKE GUTTA-PERCHA FILLINGS MOISTURE TIGHT.

Dry the cavity well, place in it a pellet of cotton saturated with absolute alcohol ; remove the cotton, and with a warm air syringe, evaporate the alcohol ; varnish the cavity with a solution of common resin in chloroform, warm the gutta-percha and pack into the cavity with a cold instrument ; heat a thin-bladed instrument and pare off the surplus filling, after which a fine polish can be given to it by rubbing with a little oil of cajeput.

PLACING RUBBER DAM ON LOWER FRONT TEETH.

A slip noose can be put on the lower front teeth with one hand, while the rubber dam is held down with the other ; get the slip knots ready first, draw them tight and they will hold as long as wanted.

THE USE OF BEADS.

The use of clamps can very often be avoided in filling teeth by tying one or two small beads near the middle of the string used as a ligature ; after placing the rubber dam, tie the ligature so that the beads will come on the lingual side of the tooth and the rubber dam will not slip off over the beads.

EXCAVATORS.

The writer is of the opinion that the old fashioned excavator and bur drill should be used in the preparation of cavities much more than they are now ; we are inclined to think that the engine is relied on too much for this purpose.

THERMAL CHANGES.

To protect from thermal changes, particularly in deep cavities where the pulp is not quite exposed, first dry with bibulous paper, then apply, on a small pellet of cotton, absolute alcohol which has a strong affinity for any moisture that may be left in the cavity or open ends of the tubuli ; when the cotton is removed, evaporation takes place rapidly, leaving the cavity perfectly dry. Now varnish inside of cavity to near the margin with a solution of common resin in chloroform or of gum sandarach, dissolved in sulphuric ether, then take a small piece of asbestos felt, moisten with pure wood creosote campho-phenique, or oil of Eucalyptus, and cover the side to go next to the pulp with a mixture of iodol oxide of zinc and vasaline ; after this is in position in the cavity, place over it a thin piece of lead or a thin piece of aluminum plate, which will prevent pressure against the most vulnerable point in the bottom of the cavity, while inserting either a gold or other metallic filling. We often cover the bottom of deep cavities with a jelly made by mixing carbolic acid and colodian together, then absorb the acid with

cotton or bibulous paper, which leaves the colodian residuum of a leather-like substance, and over which we place the asbestos, and we think we have an excellent remedy against thermal changes.

TO TAKE A PERFECT IMPRESSION FOR PARTIAL UPPER PLATE.

To take an accurate impression of the mouth for a partial upper set of teeth, smear plaster over the roof of the mouth with the finger, take a string about a foot in length, tie the ends together, put the tied ends of the loop into the plaster on the roof of the mouth and add more plaster to thoroughly imbed the knot, leaving loop of string hanging down. In placing the plaster in the mouth, care should be taken to have it come full half way over the grinding surfaces of molars and bicuspid and also cutting edges of the front teeth; then trim the plaster and varnish the trimmed surfaces. The plaster should be so trimmed that it will fill up fully one half of all spaces between the teeth; then cover all the remaining surface of the mouth and teeth with plaster, being very careful to have the teeth well covered and spaces filled in, putting plaster for the buccal and labial surfaces. When set, the plaster impression readily parts where it has been varnished, the palatal portion is dislodged with the help of the string used, and the pieces are then placed together and model made. If a tooth is irregular, use modeling compound about it and trim suitably, then apply the plaster. When removing, it breaks where joined; then remove compound, place in position in the impression and pour the model. Before pouring, the impression should be coated with a lather of soap and then immersed in water for about ten or fifteen minutes. When the plaster has had sufficient time to set, separation can be made, and a model thus obtained will not have any of the fine lines obliterated.

ARTICULATING TEETH.

Always take an impression of the lower teeth when making an upper set, and in taking the bite, have wax trimmed to show the length you wish the teeth to be, and bite into it just sufficiently to show the tips of cutting edges and cusps where the model made from lower impression can be placed in proper position, etc. For double sets, make wax models for contour in restoration of features and to show length of teeth, and then try these models in the mouth, being careful to see that you have it right; then make plaster articulating models for setting up the teeth, setting up the lower ones first against a plaster articulating plate, its articulating surface corresponding with the articulating surface of lower wax model; then lay aside the plaster articulating plate and put the

model of upper jaw in its place and set the upper teeth to the lower ones. The writer adopted this method about twenty-eight years ago, and in that length of time has not had to grind a cusp off to let the front teeth come together. But a more elaborate description of this seems to be required in order that it may be understood and adopted as a practical method. Having to make a full upper set of teeth, we will suppose the impression and model to have been made in the usual way. Take modeling composition, soften and flatten out until it is about a quarter of an inch thick, press it on the model while warm and then cut and trim to make a trial plate for the purpose of taking a bite. It should fit the model accurately. Melt a little wax around on the ridge, then press a roll of softened wax on that and trim to what you think would be a sufficient length, then try in the mouth and carefully trim the lower edge to the proper length for the teeth ; if it is not, either add to or cut away until it is found by trying in the mouth that the wax represents the proper length. This wax should be so cut on its articulating surface that all the lower natural teeth will strike at the same time when tried in the mouth. Now remove and soften the articulating wax surface just a little over the flame, then replace in the mouth and do not let the patient bite into it until you have the head drawn well back so as to put the anterior muscles of the neck on a stretch ; then have the patient bite a little on the wax just to get an impression of the cusps and cutting edges of all the lower teeth. Next take an accurate impression of the lower teeth, from which make a plaster model which will fit into the slight impressions of the teeth made in the bite taken, and then place the whole on any good articulator which can be set to maintain the relative positions. Remove the bite and you are ready to set the teeth to a correct articulation, and if all has been carefully done, the teeth will come together properly without any subsequent grinding.

For a double set (upper and lower) make trial plates of modeling composition to take the bite on, putting a piece of rather stiff wire in the lower one to stiffen it. Wax the ridges as previously described. Place a roll of softened wax on the upper trial plate, place the lower trial plate in the mouth, being careful to see that it is in its proper place, and hold it there while putting in the upper plate with the wax on it. Do not allow the patient to bite until the head is thrown back as far as you can get it ; then tell the patient to bite, and keep the jaws closed until with the finger the wax has been well pressed on to the trial plates. Mark the centre or medium line on the wax. Have patient close the lips, and then take a small straight instrument and mark on the wax the height of the lower lip. This mark should extend from one angle of the mouth to the other ; you then have the line of fissure or line of lip

closure ; in other words, the height of the lower lip and length of the upper to serve as a guide in making the wax models. After thus taking the bite, place each of the models in the bite so obtained, and fasten in any good articulator ; then prepare corresponding wax models, which should be tried in the mouth to verify their correctness. They should come together in the mouth the same as on the articulator, and if they do not they should be made to do so before proceeding further. Take particular pains to be satisfied that the wax models are correctly adjusted and give a natural expression to all the facial features, observing that the lower third of the face is in proper proportion or length with the upper two-thirds, and be sure to produce the proper fullness over the region of the upper cuspids to give as near as possible the natural contour. Then take the upper and lower plaster models off the metal articulator, and make a plaster extension to the back part of the upper model, on which place the wax models, which have been marked while in the mouth, so that they can be put in the same position out of the mouth. The lower plaster model is placed in position, and a plaster extension added to fit to that of the upper plaster model. After separating these, the lower wax model is placed on the lower plaster model, and the inside space filled with wet paper, and plaster is poured over all to make the lower articulating plate to which the lower teeth are to be set. Next place the upper model in position, after the lower teeth have been set, and set the upper teeth to the lower ones which have just been set to the lower articulating plate. Always set the lower teeth first. And in setting the upper teeth always set the bicuspid first.

Having made double sets in this way for twenty-eight years without having to do any grinding after placing them in the mouth, the writer is inclined to think that he has some claim to the conclusion that this method is a pretty good one.

To take a plaster impression with a small quantity of plaster, first take an impression in wax, and then cut away the palatal, buccal and labial surfaces to almost an eighth of an inch in depth, and over the surfaces thus formed cut slight lines in different directions, with about two teaspoonfuls of plaster spread evenly over said surfaces, and reinserted and held in place until the plaster has well set, and you have obtained an impression that has no thick body of plaster in any one place to cause uneven shrinkage.

TO DUPLICATE MODELS AND IMPRESSIONS.

Take printers' ink roller composition, heat in a water bath until well melted. Grease the model slightly with lard, and place it the same as if to mould a metal die, cover with a metal ring (a tin can opened at both ends will do), and pour the melted composition

over the model. Let this stand over night. By morning the material is hardened, and the model can be withdrawn. The composition being elastic it retains its shape, and a hundred models may be poured if necessary.

To prevent plaster from adhering to the palatine surface of vulcanite plate. Just before packing the case coat the model with a thick solution of soap, almost any kind of soap will do, but that which makes a thick lather in the shortest time is the best.

TO LINE VULCANITE PLATES WITH BLACK RUBBER.

Before packing, coat the cast three or four times with a solution of black rubber, allowing each to harden or dry before applying the next. In swaging aluminum plates, always keep the plates between two pieces of silk tissue paper, to prevent its coming in contact with either the lead or zinc, either of which metals is injurious to it. In swaging any kind of metal plate the writer has been in the habit of first stamping that portion of the plate which is to fit to the roof of the mouth, and the rest afterwards, as we shall show in our illustration.

MODELS OF MARBLE DUST AND PLASTER.

In vulcanite work the best results may be obtained by making models one-fourth marble dust and three-fourths plaster ; also the same in flasking the case.

TO PREVENT RUBBER RUNNING BETWEEN JOINTS.

To keep rubber from running between the teeth and joints in vulcanizing, after the teeth are set in the first half of the flask, plaster, trimmed and varnished, pour water on all the teeth and joints, then mix a small quantity of pure plaster, have it rather thin, and with mixing spatula cover labial and buccal surfaces, also the joints, take up the piece quickly and bring it near the mouth, and blow rather sharply against the thin plaster all around, which will force it into all spaces between the teeth or blocks. After this finish flasking in the usual way, and, if possible, it is well to allow the case to remain over night in the flask before packing.

TO TRIM RUBBER PLATE.

In finishing vulcanite plates always trim the rim low over the bicusps, leaving it high as can be worn over the cuspids, and the same over and back of the second molars ; do not file rim to a knife-like edge, slightly bevel inside of rim at the top, extending down about three-sixteenths of an inch. In upper plates the back part, or that portion over the second molar should be left as high

as it can be worn, and in many cases the rim should project over the second molars, and also over the cuspids, such projections are often a very material help in retaining plates, particularly in that class of cases generally considered as unfavorable for retention.

TO MAKE PLATINUM AND GOLD PLATE.

To make platinum and gold plate, melt with blow pipe on a piece of platinum plate pure gold, and roll to desired thickness; the result will be as good as any you can buy.

GOLD SOLDERS.

Take a United States \$5 gold piece, 20 grains coin silver, 10 grains pure copper, 6 grains English toilet pins; melt the silver and copper together first; after melting this and the gold together, add the pins, flow into an ingot and roll, cut into small pieces and melt again if it does not roll well first time; this will give a solder a little more than 19 carats fine, and flows nicely on coin gold, being the same color. This we call No. 1. Now take of

No. 1	89 grs.
Coin silver	7 "
Pure copper	4 "

Melt together and roll, and we have a second grade which we call No. 2, and which will flow on No. 1. To make a still lower grade take:

Pure gold	6 dwt.
Copper	2 "
Fine silver	1 "

And you will have a 16 carat solder. In my practice only Nos. 1 and 2 are used, and are made according to the form 1 as given above.

TO SOLDER A CAP ON GOLD CROWN.

To solder a cap on a gold tube intended for an artificial crown lay the cap on about a tablespoonful of finely cut asbestos, put the tube in place on the cap, drop in the solder and a little powdered borax, then blow a yellow flame on the asbestos, all around the tube until the solder flows, and there will be no danger of melting the gold.

TO HARDEN PLASTER BOIL IN PARAFFINE.

To give your plaster casts or models the appearance of ivory boil them in pure white wax.

THE DIAGNOSIS OF LESIONS OF THE HEART BEFORE ADMINISTERING AN ANÆSTHETIC.*

By E. H. ADAMS, M.D., D.D.S.

The subject is not of my own choice, but one which was selected for me by the Committee on Papers as one which they thought of special interest to dentists. In dealing with the subject it is my intention to avoid technicalities and even the more accurate descriptions of the differential diagnosis of heart lesions, and simply explain the general principles of diagnosis of a disease of the heart as it may seem to me to be of importance or interest to the general dental practitioner.

It is but fifty years ago from October last when sulphuric ether was administered for the first time for the production of anæsthesia for the relief of pain. It was the desire to relieve the pain of tooth extraction which led Morton, of Boston, to discover the virtues of ether as an anæsthetic. Prior to this Horace Wells, of Hartford, adopting the suggestion derived from an exhibition of "laughing gas" by an itinerant lecturer, had utilized nitrous oxide gas for a similar purpose. While, however, to dentistry was due the credit of the discovery of the anæsthesia, there are few physicians who consider that the administration of chloroform or ether should be performed by dentists. With nitrous oxide gas the dentist is more familiar than the physician, and when we consider that previous to 1881 the Colton Dental Association of New York had administered nitrous oxide to 121,709 persons without a single death, and that the Drs. Thomas, in Philadelphia, previous to 1879, had also administered the gas to 58,400 patients with an equal immunity from harm, we must conclude that either dentists are capable of using nitrous oxide or that it is a very safe remedy, or both.

As regards the deaths from heart disease, due to the administration of anæsthetics, they are, in my opinion, rarer than is generally supposed, and when they have occurred it is just possible that with more care some of them might have been prevented, while in other cases there would have been as much or even more risk to the patient without the anæsthetic.

Many medical men are of the opinion that an anæsthetic of some sort may be administered in any case of heart disease where it is necessary to perform a painful operation, no matter of how minor a nature the operation may be.

They consider there would be less danger from the chloroform or anæsthetic used than from the nervous effect on the diseased heart from the pain itself. This rule has been followed by many

* Read Before Ontario Dental Association, July, 1897.

eminent surgeons and without any bad results, additional care only being taken in the administration of the chloroform or anæsthetic used.

But while the physician may risk this with impunity it would not be safe, for many reasons, for a dentist, no matter how clever or experienced, to risk his reputation by attempting to give an anæsthetic of any sort to a patient known to be suffering from heart disease. In case of death, coroners and judges and juries and public opinion would not be so lenient or charitable as in the case of a regular qualified physician. In cases where a death should occur in a dental chair where no physician was present, the fact that the dentist had prior to administering the anæsthetic made a competent examination of the heart, or had required a certificate of freedom from heart disease from the patient's physician, would in itself do much to condone the circumstances both in the eye of the public and of the medical fraternity. This remark applies only to nitrous oxide, cocaine and local anæsthetics, as it is my opinion that, save in exceptional cases, dentists should not administer chloroform or ether without the assistance of a physician. Most surgeons who recognize fully the great value of chloroform do not hesitate to acknowledge that it is not suitable for every case.

Dr. Hunter McGuire* considers it unsuitable where there is a nervously weak heart, and adds that "of all the elements of danger to my mind from chloroform fear on the part of the patient is the greatest. If the patient is, so to speak, in mortal terror of the anæsthetic the heart is nervously weak, and the hazard to life is especially great."

Dr. Julian J. Chisholm† states "*Diseased condition of the heart, regardless of kind*, may make this important organ particularly susceptible to syncoptic influences when reflex action has full sway; hence we find violent emotional excitement a fruitful cause for mortality in subjects of heart disease. Many such persons having to undergo painful surgical operations in former times, before the introduction of chloroform, suddenly collapsed with the first incision, and they *still die as of old* when they are not protected by complete anæsthesia."

Should chloroform be freely given patients with heart disease, regardless of kind, who must submit to painful operations for the cure of some surgical affection, by its liberal use they are put in a condition of safety against all emotional and reflex annoyances, without which they could not escape trouble.

I look upon chloroform as the strong bridge which will conduct

* The choice of general anæsthetics, Richmond, October, 1887.

† Chloroform the best of anæsthetics, Baltimore, 1888.

patients suffering from serious heart disease safely over serious operations. As a surgeon in a large ophthalmic practise, I frequently am compelled to perform the most delicate and painful operations upon the eyes of timid patients suffering from heart-disease in some one of its varied forms. Cataracts occurring usually at an advanced age, most frequently between 60 and 85 years of age, are often associated with organic disease of the heart in patients enfeebled by senility. Prior to the introduction of cocaine, I never refused to give such patients chloroform. On the contrary, I urged its use. The only difference that I made in such cases over other patients, was by exercising even more care in establishing the safe stage of complete anæsthesia through the liberal use of the drug.

Dr. Wm. Martin Coates,* of the Salisbury Infirmary, says: "Although I have, during these 24 years, never been prevented from administering it (chloroform by means of Snow's inhaler) by extreme age or infancy, by chronically diseased heart, lungs or kidney, I have not had a death by chloroform. During these 24 years, I have never refused chloroform to any patient in whose case pain was anticipated."

Surgeon Major Lowrie,† a principal of the Hyderabad Medical School, who gave the results of the experiments conducted by him for the government of Nizam on the effects of chloroform as an anæsthetic, states that he found in the hundreds of experiments on dogs, that in no case did the heart become dangerously affected by chloroform until after breathing had stopped. This, he says, tallies with his own experience, for in 40,000 to 50,000 cases which he had superintended, he had never seen the heart injuriously or dangerously affected by it.

This Hyderabad commission differs from the conclusions of the commission appointed by the Royal Medico-Chirurgical Society and that appointed by the British Medical Association, and that also of the Boston Society for the Improvement of Medical Science.

H. C. Wood, in a recent article on Anæsthesia (Denin's System of Surgery, 1895, page 658), says:

"*Valvular disease of the heart* is sometimes alleged to be a positive contra-indication to anæsthetic agents. When, however, the organic disease does not produce any absolute functional derangement of the heart, and when the heart is in a fair condition of health, anæsthesia may be induced, providing the circumstances of the case are such as to justify the surgeon taking a slightly increased risk. The key to the situation is not the valvular lesion

**Lancet*, Dec. 23rd, 1882.

†*British Medical Journal*, Feb. 23rd, 1889.

but the condition of the muscle ; a loud murmur depends, to some extent at least, for its loudness upon the valvular lesion, but it is also dependent in part for its loudness upon the force which drives the blood through the diseased orifice. A loud murmur is therefore, on the whole, not more strongly contra-indication of anæsthesia than a feeble one. Indeed, as the feeble murmur is more commonly associated with feeble walls of the heart, greater care must be exercised when such a murmur exists than when a loud bruit forces itself upon the physician's attention."

Among the many distinct diseases of the heart may be mentioned acute-endocarditis, valvular disease of the heart, myocarditis, idiopathic hypertrophy, dilatation of the heart, fatty heart, neuroses of the heart and nervous palpitation.

It is more with heart disease in general that this paper has to do.

In myocarditis, we have to do with a lesion of the cardiac muscle itself, or of its nervous apparatus which can reduce the functional capacity of the organ for work and thus produce precisely the same disturbances of circulation as are produced in valvular disease of the heart by purely mechanical reasons. In most of the uncomplicated cases there are atheromatous changes in the coronary arteries usually coincident with a more or less general arterio-sclerosis. The diagnosis of myocarditis is by no means easy and certain. We must first make out the presence of heart disease in general. This is usually easy to do from the secondary symptoms of stasis, *i.e.*, œdema, the dyspnœa or difficult breathing, the irregular pulse and the increase of the heart's dullness due to hypertrophy or dilatation.

Auscultation shows the absence of a murmur and hence of valvular heart disease. We have always left the distinction between myocarditis and idiopathic hypertrophy of the heart and fatty heart. This it is almost impossible to make with certainty.

The chief cases of heart disease which are to be found in patients frequenting the dental chair, and those which it is almost always possible to distinguish by one physical examination of the heart are patients with chronic valvular disease of the heart.

In the more advanced cases, where there is much œdema, cyanosis, palpitation, difficulty of breathing, etc., the patient is already aware of his condition, or, if not, these conditions will readily excite the suspicion of the physician or dentist in charge. In heart disease, however, which is well compensated, the cyanosis is recognized only by the practised eye as a slight bluish tinge at the lips, the alæ of the nose, the cheeks, or the nails. As a rule the first and chief complaint of the patient is directed towards his difficulty in breathing. The shortness of breath, which increases on any physical exertion, and palpitation, come on quite early in many cases. Pain in the cardiac region is only rarely present in heart disease.

Among the first symptoms of œdemas are a slight swelling of the ankles or eyelids. It is only, however, by making a physical examination of the heart that an accurate diagnosis can be made in early cases. Before describing these methods of diagnosis, it will be well to understand the *general pathology of valvular disease of the heart*. Every valve of the heart, in order to fulfil its physiological task, must on the one hand open perfectly at the right time in order to furnish a free passage to the blood current through the appropriate orifice, and must, on the other hand, close perfectly and firmly at the right time in order to make any abnormal backward flow of blood impossible. It will readily be seen that if there is an acute or chronic endocarditis or inflammation of the lineal membrane of the heart and valves, that there may develop a contraction of the free edges of the valves or a shortening of the chorda tendinal, and so the closure of the valve cannot be complete. This we call an *insufficiency of the valve*, and when it affects the mitral valve is one of the most frequent forms of heart disease. On the other hand, as a result of thickening and calcification, and a result of adhesion, the valves may form, be united together, and thus, when the blood current should pass freely through the open orifice, the valve remains a stiff narrow ring through which the blood must force its way, and this we call stenosis of the orifice.

Mitral insufficiency, as has been said, is one of the most frequent forms of heart disease. The closure of the mitral valve occurs normally at each systole or contraction of the left ventricle. It prevents the return of blood from the left ventricle to the left auricle. If the mitral valve is insufficient and its closure is incomplete, at every systole of the left ventricle a part of the blood is accordingly thrown back from it into the left auricle. This abnormal backward wave encounters the blood current coming in an opposite direction into the left auricle from the pulmonary veins. Since these two opposing currents rebound against each other they cause a loud blowing systolic murmur in the heart. We hear this murmur loudest at the apex of the heart, and either replacing the first sound of the heart or in addition to it. The second sound is often obscure or inaudible at the apex.

Any dentist can readily familiarize himself with the sounds of the normal heart by means of a stethoscope, or, better still, with a phonendoscope or Marsh's stethophone. The latter instrument may be used with advantage even without removing the clothing from over the region of the heart. Once familiar with the normal clear and distinct hub-dub of the heart, it is easy to detect any abnormal murmurs in the region of the heart.

In mitral stenosis, which often develops as a sequel of a previous insufficiency, the auscultatory sign is a diastolic murmur at the apex. This is never so loud and blowing as the systolic murmur of insufficiency, but it usually sounds more rolling and rippling.

In insufficiency of the semi-lunar valves of the aorta there is a long-drawn loud-blowing diastolic murmur, which is heard loudest at the upper part of the sternum, or even at its left border.

Other forms of valvular disease are comparatively rare, and need scarcely be considered in a paper such as this.

While auscultation is by far the most important means of physical diagnosis, inspection, palpitation and percussion are also of importance. To utilize these methods of diagnosis it will be necessary to be fully conversant with the size, dimensions and position of the normal heart. The heart as a whole extends vertically from the second intercostal space to the sixth costal cartilage, and transversely from about half an inch to the right of the sternum to within half an inch from the left nipple. Posteriorly the base lies opposite the sixth and seventh dorsal vertebræ.

The whole of the anterior surface of the heart is overlapped by the lungs except a triangular space corresponding to the lower portion of the right ventricle.

By *inspection* you note any changes in the heart's impulse where it strikes the walls of the chest.

By *palpitation* you can determine the force of the cardiac pulsation; the frequency or slowness of the heart's action and its regularity or irregularity, and also, if present, the "purring tremor" or purring thrill, a peculiar sensation felt by pressing the hand over the heart.

By *percussion* we determine the exact outline of the heart itself, and note any increase of size or position, and thus show any hypertrophy or displacement. It is best performed by applying the palmar surface of the left index or middle finger to the chest wall and striking with one or more of the fingers of the left hand. By this means the dullness, flatness or resonance, etc., of the organ percussed is noted.

THE STUDY OF ANATOMY.*

By W. C. BARRETT, M.D., D.D.S., M.D.S., Buffalo, N.Y.

This association has wrought a great work in securing the adoption of something like uniformity of action in the admission of students, and in the raising of the general educational standard. If one would have some comprehension of its beneficent influence, he has but to reflect upon what was the general character of American schools, and what their reputation abroad before the

* Read by request before the National Association of Dental Faculties, Old Point Comfort, July 31, 1897.

organization of the National Association of Dental Faculties, as compared with the present condition. And yet it has done but a small proportion of its manifest duty. Its accomplishments have been elementary.

It is not too much to say that our professional reputation must be what our colleges make it. We are the educators of those who are to be the leaders in the professional matters of the future. The next generation of dentists will be what we shall make it. Legislators may pass laws to regulate and restrict dental practice, but the stream can rise no higher than the fountain-head, and the practitioner of to-morrow must get his training and derive his professional knowledge from the school to-day. He must enter the profession by submitting himself to our guidance. The colleges are the fountain-head, and the stream will be limpid or foul according to whether we purify or contaminate it.

This should be a proud position. It certainly is a responsible one, and woe betide the college professor who does not realize his accountability. The man who accepts the honor which may appertain to this distinguished station, without striving his utmost to be in every way worthy of it, to fulfill every duty with an eye single to the best interest of student and profession, is unworthy a place in our ranks. He who assumes to arm the young men of our country for the battle of life, to fit them and equip them for an honorable career simply that he may minister to his own good, who takes the teacher's place and ascends the instructor's rostrum from selfish motives, is a worse hypocrite than the preacher whose every-day life belies his own sermons.

I believe that we are all sincere in desiring to make our schools, and through them the profession, all that they should be. To secure this it is not enough that we look solely to the preliminary qualifications of those whom we accept as candidates for a confidential position in American families. We need to make our instruction as perfect as possible. This cannot be done unless there is a generally accepted standard, and some uniformity in system. At present one of our greatest sources of weakness lies in the fact that there is no common comprehension of a standard of methods. One school begins instruction with the alphabet, proceeds to the construction of simple words, and by regular gradations to the building up of sentences. Another commences by an analysis of the sentence into its component words, and then studies the elementary symbols constituting the words.

That is, one teacher is synthetical, and the other strictly analytical. A student takes his first and second year in one school, and then circumstances or inclination cause him to finish his course at another. He commences under analytical teachers, and closes with a school that only arrives at the stage of analysis in the clos-

ing year. Hence, in reality that student never reaches the end of any regularly graded course. In this way the practical efficiency of that graduate can never be assured. Let me illustrate this by the various methods of arriving at a knowledge of that basal study in all schools that attempt to teach the healing art—*anatomy*.

Some teachers open their course with an examination of the elements of which the human body is composed. That is, they begin with *histology*. They commence with the cell, and after having given a fair knowledge of that, they proceed to construct the cells into tissues, which are then considered. Then the tissues are built into organs, and finally the organs into the systems which they compose, and they do not arrive at a consideration of the human body as a whole until the last year.

Another pursues the opposite course. He begins with a study of the *anatomy* as a complete system. He considers its functions, and then goes on to study the organs whose actions make function, and finally to the ultimate elements of which organs and tissues are composed, and whose aberrant functions afford the pathological disturbances with which it is to be his life's work to battle.

The student who spends his first year in a school that begins with *histology*, and who goes to one that ends its course with tissue elements, never gets beyond elementary matters in his entire college training. This certainly will not tend to make the best practitioners; or to raise our profession to its highest point of efficiency. There should be a comprehension of the benefits of each method, a careful discussion of the merits of all systems of teaching, and an intelligent and discriminating adoption of that which is best. To this end I have accepted the invitation of the executive committee to bring this subject before you.

I am a believer in the analytical system. I think it is easier to arrive at an understanding by taking in pieces that which we do not construct, and thus get at a knowledge of the mysteries of that which we must attempt to repair. Let me give you my reasons for this faith, and then please allow me to listen while you show me wherein I am wrong, or confirm my prepossessions by your own corroborative testimony. Do not then understand me as speaking dogmatically when I propose the following methods in teaching *anatomy*, but only as offering suggestions.

Our sole reason for examining tissues and organs is that we may learn their action and function. Hence, we should begin with function. This requires that the preliminary examination should be of the system, and not of its organs. The study of *anatomy*, then, should commence with a general examination of the body as a whole. In a dental school the first year should be devoted to general *anatomy*, beginning with *osteology*, or the frame-work. Then the viscera should be taken up, and their general morphology

and function should be studied. This should be followed by myology, syndesmology, and neurology, that a fair idea of the whole body may be obtained. Practical anatomy should be commenced this term, and one extremity dissected. It has sometimes been urged that the student should not dissect until he has learned something of anatomy. This argument would be cogent if the object were to learn how to dissect. But we dissect to learn anatomy, and do not learn anatomy to discover how best to dissect.

All the study of this year should be general. Not a hint of any specialty should be given, and hence the teacher for this year is preferably a medical man. If he is a dentist, he is apt to introduce his specialty too early. The general study of the human body should be finished in the freshman year.

In the second, or junior year, the student begins to differentiate in his study. He should now take up regional anatomy. He has finished the study of the body as a whole. Not that he has learned all that he should, but he has devoted all the time that can be spared out of a three years' course, and he takes up the study of the part to which he is to devote his attention as a specialist. His field is bounded below by the clavicle, and he must have a special, definite, intimate knowledge of all above that.

As a part of this he commences the study of dental anatomy. The first step in this is comparative dental anatomy—that is, the study of the dental organs as a whole, precisely as he began the first year in general anatomy. The dentist who learns nothing of the general relations of the teeth, and whose comprehension of them is only that they are organs out of which he is to pick his living, cannot claim any scientific knowledge. The teeth in all the different classes of animals should be generally studied, until the dentition of man is reached, when his teeth should be intimately studied in all their anatomical relations. The anatomy of the second or junior year is, as a whole, devoted to organs, as to that of the first year to systems.

No man can finish the anatomical studies necessary to dental practice in two years. He imperatively needs the third year, and this should be given up to careful examination and investigation of tissues. In this year the microscope is a necessary adjunct. The student has now learned enough of function to comprehend how it modifies, or is modified, by structural development. In this third and finishing year he does not entirely confine his attention to histological anatomy, but he continues regional anatomy, because he is not yet sufficiently familiar with the organs, especially of the head. He also bestows considerable attention upon surgical, and morbid, or pathological anatomy. But his chief attention is given to structural, or histological anatomy, and he thus finishes his course by attention to the minutiae and detail for which he is

unprepared during his first or second year, because he has not then the general knowledge to allow him fully to comprehend it, and because his mind usually is not sufficiently trained and disciplined to give him mastery over his attention.

The student who thus advances by regular gradations each year, separately taking up and mastering a definite branch or part of the subject, will be likely to retain his knowledge, because he has advanced toward it by a direct route, and because each division is made subsidiary to the next, and there is a regular gradation and progress.

If such a system, or if some other regular system, can be adopted in its general features by all of our schools, the grading of one who for any cause changes his college during his course will be greatly facilitated, and he will not be likely to miss any of the subdivisions. Our graduates will be better qualified for practice, and the tone of the profession will be elevated.

I would pursue the same general plan in the study of chemistry and physiology, the other basal studies of the theoretical curriculum. They should extend through the entire course, the last year in each to be devoted to special instruction adapted to an exclusive dental practice.

Materia medica should begin with the first year, but therapeutics cannot be profitably commenced until the student has obtained some knowledge of drugs, and hence it becomes a second and third year study, materia medica extending over the first two years.

Embryology properly belongs to the second year, because its study demands an acquaintance with technical terms that are all unfamiliar at the outset, and because it is an intricate and involved matter which requires a disciplined attention. Aside from these, there is no reason why it might not be begun with the freshman year.

Metallurgy is a second year study, because its consideration demands a good acquaintance with general chemical laws, and these are acquired during the first year.

Surgery is a third year study, because it demands not only a complete knowledge of anatomy, but a trained hand and absorbed attention as well. The student should begin the study of surgical pathology in the second year, and it may perhaps form a part of his general pathological studies.

Pathology should be differentiated from operative dentistry. They have very little in common, save that each may be curative. But operative dentistry is wholly mechanical and manipulative, while pathology should cover all medicinal and general treatment. Operative dentistry is largely prophylactic, while pathology is so to but a slight degree. Whatever has to do with the action of

drugs, whether generally or topically applied, belongs to pathological practice. In the treatment of alveolar abscess, for instance, operative dentistry has very little part, its practice being confined to that which is mechanical, or that which is done with instruments. I believe that in the past we have not sufficiently distinguished between the two. A sharp line of demarkation should be drawn between that which is mechanical and that which is therapeutical.

It will be seen that I have not attempted to assign any place to the practical part of dentistry. My subject was the teaching of anatomy, but I have thought it not inappropriate to suggest some thought concerning other didactic studies.

Let me repeat that I have only considered the matter tentatively, and realize as fully as any of you that there is room for much consideration and extended discussion before the various studies in our curriculum shall each have been definitely assigned its appropriate place.

WHERE IGNORANCE WAS NOT BLISS.

By MALCOLM W. SPARROW, L.D.S., Toronto.

While reading Dr. Martin's article on "Popular Dental Education," in the May number of your valuable journal, I was convinced of the truth there is in his reference to the ignorance of medical men—not all—who pretend—or shall I say, presume—to diagnose troubles which pertain strictly to the science of dentistry. Not only this, but the readiness with which some M.D.'s undertake the treatment of cases that are entirely out of their sphere—such as the extracting of troublesome teeth, the treatment of alveolar abscesses, *et cetera*, or by telling their patients hobgoblin stories about some maxillary trouble or another, which they do not themselves understand, nor have been taught to understand, thereby rendering it almost impossible for a dentist to remove from the patient's mind the fallacy of the M.D.'s diagnosis—is indeed provoking.

It seems to me that a medical man, without the degree of L.D.S. or D.D.S., ought not to prescribe for a patient suffering from derangement of the masticating organs—unless for temporary relief—any more than a dentist, without the degree of M.D., should prescribe for a patient suffering from a derangement of the digestive organs. It is no more than right that we should be fair with one another at all times. Some medical men, however, will grab at anything which promises a fee, and if the patient suffers through their ignorance of dental science, *messieurs les docteurs* try to justify

themselves by declaring the case a most remarkable one, and continuing experimental treatment until some friend of the patient advises him or her to consult a dentist, usually at a time when it is "too late to mend." The medical profession should be a *corps d'honneur* as well as a *corps de guérir*.

All this leads up to a case I have at present, which the result of the M.D.'s ignorance has proven so serious to the patient that I feel justified in my "righteous indignation."

One day, some two years ago, a young woman whom I had often seen in the hotel at which I dine, came into the dining room with a badly swollen face. Being on speaking terms, I made some jocose remark about the pleasures of toothache, when she informed me, with a satisfaction that piqued my vanity, that Dr. ——— (a distinguished M.D.) was treating her. Being somewhat sensitive, and remembering certain rules of professional etiquette, I said no more. Three days later I was dining at the same hotel, with Dr. ——— (the aforesaid M.D.) sitting opposite, when I walked the young woman, with her face so badly swollen that her right eye was almost closed. As she remained out of hearing, I ventured to broach the subject to her physician.

"You are treating Miss ———?" said I.

This may have been cheeky of me, but I felt that I knew Dr. ——— well enough to make the query. I may add that the doctor was a practitioner of some twenty years' experience.

"Yes," said he. "It is a very bad case."

"What do you think it is?" said I, growing bolder, and at the same time wondering if the trouble could be some complication of which I was ignorant.

"Well, hem—ah—it is something out of the usual order," said he, with an air of great intelligence.

"Abscess of the antrum?" I ventured.

Now, I do not think I was presumptuous in making this venture, because I believe any dentist would have ventured the same remark, and with considerable less diffidence, perhaps.

"Oh no; oh, no. Nothing of the kind," said the wise M.D., with great assurance, and not a little hauteur, "it is something very extraordinary; very extraordinary, indeed."

I resumed my soup with a feeling that I had been sat upon.

The patient disappeared. Her physician, however, continued to take his meals, *sans souci*, at the same table with me, and having been sat upon once, I was very careful not to place myself in a position to be sat upon again, therefore our loquacity was exercised over everything but the girl with the swollen face. The next I heard of her she was in the hospital.

Several months afterwards, she came to me to consult about the

possibilities of an artificial denture. The condition of her mouth was appalling. From the left central to the right wisdom, the teeth and the alveolus were gone. The soft tissues were in a very angry condition, and there was a most obnoxious discharge of pus. Just then an artificial denture was out of the question. As she was under the physician's care, I told her to continue his treatment until the mouth was in a proper condition, then I would, if she desired, see what could be done for her. I saw her several times, at rather lengthy intervals, but it was not until a few days ago that I was enabled to take an impression. The brief history of the case is as follows :

1. An ulcerated superior right six-year molar, which was neglected until face began to swell.

2. The learned M.D.'s wonderful diagnosis and experimental treatment.

3. Abscess of the antrum, with all its pain and offensiveness.

4. A change of physicians (this man understood the case, but it was too late), followed by several weeks in the hospital, excruciating suffering, loss of teeth from superior left central to superior right wisdom, with continued suffering.

5. Necrosis of alveolus from central to wisdom, which came away in three pieces. I have in my possession one piece of bone which embraces the socket of the right central, lateral, canine, and first bicuspid. I have also a model of the mouth as it is at present.

Last, but by no means least, one year and a half of treatment and waiting, to say nothing of the annoyance and inconvenience before the wound healed. During this time the patient was at home, some distance from the city, under the treatment of her physician.

The wound is now healed, with the floor of the antrum gone, and a fissure opening through the soft tissue, which permits air and fluids to pass through the nose from the mouth. How I am to succeed with an artificial denture is a problem which just now appears to be something akin to a Chinese puzzle.

This whole trouble, I think, can safely be attributed to the ignorance of the M.D., who was so wondrous wise in his diagnosis. With this example before me, I can heartily coincide with Dr. Martin's statement :

"There are many notable exceptions among the medical profession, but we fear by far the greater majority are sadly, culpably ignorant of the simplest principles of dental conservation."

Proceedings of Dental Societies.

"LONDON DENTAL SOCIETY."

This society was formed in April last, to meet during the winter months, and has an enrolled membership of fifteen practitioners, as well as the students of respective members.

Dr. L. McDonald is the enthusiastic president, and shows the same interest as when curling the stone and "sooping her up."

Dr. H. R. Abbott exhibits for vice-president the same amount of energy as when riding his favorite hunter.

Dr. Fred. L. Wood, for secretary and treasurer, with the following: Drs. C. Abbott, Smith, Swann, Woolverton, Bentley, Harvey, J. A. Wood, Zeigler, Davis, Rea, Davidson and Holmes, as members.

The first meeting, held Saturday, Nov. 7th, at Dr. Davis' parlors was given over entirely to forming by-laws, constitution, and code of ethics to govern the society.

The second meeting was held on Saturday, Dec. 5th, same place, and was indeed one of great profit and benefit to all present.

Dr. Davis was nominated as a candidate for the Dental Board and we are pleased to note that he has been elected to fill the position. A more capable or energetic member of that Board could not be found, and we congratulate him on his success in attaining the appointment.

The Programme Committee introduced Dr. Davis, and the genial Dr. read an essay, the subject of which, "The Choice of a Filling Material," showed thought and study, and provoked a pleasant discussion, which was heartily entered into by all present, the older members giving their experiences, which must prove of great benefit to the younger.

At our next regular meeting Dr. Harvey will be the essayist.

Question Drawer.

Edited by DR. R. E. SPARKS, M.D., D.D.S., L.D.S., Kingston, Ont.

QUESTIONS.

Q. 36.—What is the best method of bleaching a tooth, discolored after the use of arsenic? Is the discoloration likely to return? If so, why?

Q. 37.—How may we diagnose an abscess in the bifurcation of the roots of a molar?

Dominion Dental Journal

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VOL. IX.

SEPTEMBER, 1897.

NO. 9.

A HINT TO THE ONTARIO SOCIETY.

At the meeting of the Dental Society of the State of New York last month, Dr. Crouse referred to the way in which at a meeting of the American Dental Association he tripped up the "famous" Dr. Sheffield, whom some of our advertising charlatans quote as "authority." "Old Dr. Sheffield came there with his credentials before I even knew who he was. I sat at the table with my book, and he came in. *Ahead of him had come a lot of his advertisements.* When I asked him if he was authority for those documents, he wanted to know where I got them. An intimate friend of his told me he said many times it was the most fatal thing to his happiness that ever happened. He went home and spoke of it afterwards as being the greatest rebuff he had ever met. I speak of this to show that laws are necessary. It is not enjoyable to hold a man off like that, so we made it a rule that delegates should come with a *clean record. It has done more in the last eighteen years to make local societies keep their membership clean than anything else.*"

The Ontario Society might have a book for the special purpose of collecting the obnoxious advertisements of the profession. It should be open for public inspection at the annual meeting.

THE PATRON FUNERAL.

The funeral of the "Patrons" has at last occurred in Toronto. For a time it appeared as if this body would become formidable in the Ontario Legislature. It set out to abolish the Government House, to reduce expenditure, secure for the municipalities their old control over official appointments, abolish railway passes, and make "free trade in dentistry." Some of our discreet friends had reason, perhaps, to fear the interference of this organization, but it is at last dead and done for, and has not left a savory record behind it. There are occasions when one may rejoice over a grave. This is one.

ETHICS.

IT is rather curious to find ethical members of the profession making mock excuses for the sins and peccadilloes of the quacks. One good friend of ours in Ontario reiterates the charge that we are too hard on them. *Sub rosa*, he has more contempt than pity for them, but he does not think it politic to express himself openly, yet he offers no alternative suggestion but the policy of letting things drift. Now, the profession would be under deep obligations to any one who would find a remedy for quackery and quack-imitation other than exposure and ostracism. Would our worthy friend suggest something more effective? He happens to live in a town, which, for the present, is not pre-empted by the professional sharper. We would be only too glad to adopt milder methods, if it can be shown from even one instance that the quack and the gutter-dentist can be converted from the error of their ways by mission efforts of a purely philanthropic and persuasive character. Experience has proven the value of the logic of exposure. Exposure of existing quackery has deterred some, too, from following in its footsteps.

GEOGRAPHY OF THE TEETH.

IN an interesting series of articles in the *Popular Science Monthly* on the racial geography of Europe, France, the Teuton and the Celt is discussed in the July issue, and mention made of facts in connection with the teeth, which was brought to our notice in 1875 by Dr. Ed. Lefavre, of Paris, formerly of Montreal. On the calcareous plains of central France the people are taller, of light complexion, with blue or grayish-blue eyes, and having fine teeth; while in the upland areas of a granitic formation, the

people were stunted, dark in complexion with very poor teeth. The former are a superior group, intellectually and morally as well as physically. During a prolonged pedestrian tour with our *confrere* in Brittany and Normandy, we were much struck with the difference in the physical types in favor of the latter. Normandy contains the blondest people of France, Brittany the darkest and most benighted. Even the cattle have marked differences which, with the contrasts in the human types, are attributed to the influences of physical environment. Progress and prosperity show their effects in superior physique. Normandy and good teeth; Brittany and bad teeth. Brittany is the most devout (superstitious). The native Breton peasants are the filthiest people in Europe.

Reviews.

The American Text-Book of Operative Dentistry. In contributions by eminent American authorities. Edited by EDWARD C. KIRK, D.D.S., Professor of Clinical Dentistry, University of Pennsylvania, Department of Dentistry. In one very handsome octavo volume of 699 pages, with 751 engravings. Cloth, \$5.50; leather, \$6.50; *net*. Lea Bros. & Co., publishers, Philadelphia and New York.

Dental literature, dental practitioners and dental students have all made a notable acquisition in this work. From a literary point of view it will add to the reputation of the profession, to the practising dentist it will furnish the latest and best information in the operative part of his work, and it will aid the student in mastering the art and profession of dentistry in the first place by the emphasis laid on the scientific principles, and secondly by the full treatment given to the descriptive data.

Of all the medical sciences dentistry has perhaps received the highest specialization. To present it completely in its ripest modern development is beyond the power of any one mind, hence the wisdom and necessity of invoking the knowledge possessed by recognized authorities in the various departments. The editor, Dr. Kirk, is intimately acquainted with the personnel of the dental profession, and he has secured the willing services of Drs. R. R. Andrews, H. H. Burchard, C. S. Case, W. E. Christensen, D. M. Clapp, M. H. Cryer, E. T. Darby, C. L. Goddard, L. H. Guilford, Louis Jack, L. Ottogy, C. N. Peirce, J. D. Thomas, and A. H. Thompson, to whose admirable chapters he has added one from his own experience.

The work is essentially a new departure; old traditions have

been subjected to critical study and rejected when found obsolete, or restated when their value was evident. The plan followed has resulted in a practical exposition of all that may be fairly included under the title, so arranged and presented as to meet the requirements of those for whom it was written. The statements made are either those of verified fact or are based on deductions warranted by existing knowledge. Ample use has been made of pictures, the series including no less than 750 engravings illustrative of the present status of the science and art of operative dentistry.

In this volume and its companion, "The American Text-book of Prosthetic Dentistry," edited by Professor Essig, it may be reasonably said that dental students and practitioners have a clear, comprehensive and sufficiently complete statement of the two great departments of their profession, representing its present advanced status in the country to which it chiefly owes its development.

SIX CALCULI IN STENO'S DUCT IN A CHILD OF THIRTEEN YEARS.—Dr. Deuer, in *Jour. de Clinig. et de Therap. inf.* (No. 16, p. 317, 1897) reviews this case from *La. Pres. Med. Belg.*: The child complained of slight difficulty in mastication, pains in the right jaw and intermittent swelling, principally in cold and damp weather. Symptoms began three years ago. There was no dryness of the mouth. Hard bodies were felt in the duct. The probe took the course of a dipping curve through the duct but failed to reach the stones. Incision was made along the anterior margin of the masseter, and the six concretions were removed from a pouch in the duct, weighing 1-15 grn. to 2 grn. each. De Closmadeuc (in 1855), out of 132 salivary calculi, found only 11 in Steno's duct.—*Amer. Med. Surg. Bulletin*, July, 25th, 1897.

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Dominion Dental Journal

VOL. IX.

TORONTO, OCTOBER, 1897.

NO. 10.

Original Communications

PRESIDENT'S ADDRESS, NEW BRUNSWICK DENTAL ASSOCIATION.

GENTLEMEN,—In welcoming you to the eighth annual meeting of the Dental Association of New Brunswick, for social and fraternal intercourse, as well as for the study and discussion of subjects pertaining to the welfare of our chosen profession, there is such a multiplicity of subjects which suggest themselves to my mind as suitable to refer to, that it is no easy matter to decide which would be of the greater importance for our consideration, or which might with less loss be left unmentioned.

The events which have transpired during the last four months here aided very materially in determining the trend my thoughts have taken ; for the year of grace 1897 might very aptly be termed, in so far as all British subjects are concerned, “a year of retrospect.”

From every quarter of an empire, surpassing in magnitude and importance any that the world has ever known and upon which the light of day is constant, have been going up songs and shouts of rejoicing and gladness that an All-Wise Designer has permitted a sovereign lady to rule for the unprecedented term of threescore years. Of itself the long term of years would prove but small cause for rejoicing were it not for the fact that they had proved years of usefulness, years of progress and enlightenment in the arts and sciences ; years which have witnessed unrivalled advancement in the solution of social, political and moral problems, and which have found freedom of thought, of action, and of utterance, throughout this empire, in a manner never before realized by the nations of the earth. They have taught us by an object lesson to

look forward to the years yet to come with greater anticipation and more lofty aspirations, and they have filled us with a manly courage, and made us buoyant with hope.

To the members of the dental profession

THEY HAVE ANOTHER EQUALLY DEEP SIGNIFICANCE.

The period of that reign is almost cotemporaneous with the organized life of what now commands no unimportant place among the liberal professions. Fifty-eight years have elapsed since the first small class of students in any incorporated college in America stood before its faculty, and infused with a feeling of brilliant expectancy, received the degree of doctor of dental surgery. To-day their name is legion.

It would be presumption on my part to attempt to recite the events which to dentists will appear as most important, when the doings of this period come to be crystallized into the history of the future. With them we are all familiar. And with that noble band of apostles, the best years of whose lives were spent, and are being spent, in their endeavors to fathom the mysteries of our restricted specialty, or with those geniuses of mechanism and art, who have taught us to supply the deficiencies nature has oftentimes been guilty of in her handiwork, or to reproduce parts which man in his negligence or inability to preserve, have become useless or defunct—we, too, are familiar.

Those sturdy veterans are aged and are aging. Many, too many, of those old familiar faces have already completed their last experiment, written their last treatise, and have departed to that bourn from which no traveller returneth.

As we reflect, one thought transcending all others in impressiveness forces itself to our attention—has the sum of knowledge already been completed, and are the wheels of progress after sixty years of continuous movement now to clog and stop? or has the present generation, but now, as it were, entering the fray, no solemn obligation resting upon it, to assume the responsibilities of the task their fathers are now wearily laying aside, and with their might toil while with them yet it is the day? Our duty to the future, as well as to the urgency of the present, and our respect for the past make answer for us. But a mere cursory glance is necessary to reveal that the responsibility resting upon us is of a dual nature, and is as much toward the community as toward ourselves; and that all our efforts for the betterment of existing conditions, whether by legal enactment or by scientific research, should be so directed as to guard the welfare of the one, and to protect and advance the interests of the other.

Of late years nearly every community has taken the precaution to determine who shall have the power to practise within its pre-

cincts; in fact, as one writer said: All dental laws are but an assertion by the people of their police power for their own protection, and such legislation is defensible only on the theory that inasmuch as ignorance and malpractice in any branch of medicine are followed by consequences serious to the health of the patient the public has a right to demand of those desirous of attending bodily ailments, proofs of fitness for such calling. And inasmuch as the duty of any member of a liberal profession demands that he shall give the public the advice best calculated to protect their every interest, so it is the duty of the dentist when consulted, as they generally are, as to the practicability of laws about to be enacted, or as to regulations for the carrying out of the same, to advise licensing only upon evidence of such requirements as will leave no doubt in his mind concerning the qualifications of the applicant.

In this connection it might be mentioned that the tendency is very apparent with the medical and other liberal professions to

KEEP THE STANDARD OF QUALIFICATION WELL ABREAST
OF THE TIMES,

and from year to year to make the test more comprehensive and more exacting. This is as it should be, and while the claim of some enthusiastic medicos, that graduation in arts should be made the standard of matriculation, or if the preliminary may appear rather exacting, still the idea that the matriculation examination is but of minor importance, provided the candidate is successful with his finals, is altogether too widely spread and ought to be contradicted. Immediately take issue with such idea, first because the mental training and acquirements, such as only a good course of reading in English will produce, are highly essential, and secondly because if one fails to acquire studious habits in early life, it is extremely doubtful, to my mind, if he will be found one who will afterwards pursue a course of direct or collateral reading such as ought to be pursued by a member of any liberal profession; and therefore 'twere good for him and better for the profession had he adopted some other calling for his life-work.

Harris says "dentistry, as a true science and art, is built upon the foundation of a generous early education," and "it requires the broadest literary and classical education of boyhood to counteract the necessarily narrowing influences of the professional studies of manhood." And if that early reading be neglected, he adds that it is by such early restriction of thought and action within the narrow limits of life's future pursuit, that a physician is unknown beyond the sick-room; a surgeon contributes nothing to the interests of science, etc.; a dentist holds no social position.

It is dental advisers we wish to see emanating from our colleges and joining our ranks, rather than mere operators ; a life of mere mechanical routine, both unsought and undesired, must in the latter case inevitably follow.

In a commencement address before the Dental and Medical Schools of Harvard, Edward Smith Hale claimed that every diploma granted in a liberal profession contained these pledges which those who received them bound themselves to maintain by accepting : A pledge to learn for all ; a pledge to practise for all, and a pledge to teach freely for all. It was certainly a lofty ideal, and one which would probably benefit both us individually and the profession at large to-day, more frequently to reflect thereon and be governed thereby. To furnish gratuitously the results of long hours of study and research for the good of the cause, when the indications are that reciprocal benefits are extremely doubtful, is indeed to exhibit an unselfish devotion to the cause of advancement simply for advancement's sake. And yet were it not for such untiring and unrequited zeal in the past, progress real and true could never have been accomplished.

WE HONOR AND REVERE SUCH TEACHERS,

in fact we are under a solemn obligation, by expression of appreciation, if by no other means, to honor such efforts. That, coupled with the reward of a satisfied conscience (neither of which will contribute very materially toward procuring the necessities of a morbid humanity) forms in most instances the reward of the truly faithful.

To indicate an ideal line of professionalism and to theorize thereon are easy matters, but in the daily struggle for existence one oftentimes loses sight of the ideal and descends to the more sordid plane of ordinary business methods and struggles. 'Tis the fate of humanity to err, and to err through lack of regard for a man's contemporaries and his profession is through a lack of judgment.

The peculiar nature of work pertaining to our calling, containing as it does so much of the mechanical and therefore bordering very near to the standard of mercantile life, makes it the more difficult to entirely eliminate from our midst what might be termed business ideas and business principles. Just to what extent we will be successful in

SURROUNDING OURSELVES BY A WALL OF PROFESSIONALISM will be entirely controlled by our own action and utterances.

Lord Bacon says : " I hold every man a debtor to his profession ; from the which as men do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends

to be a help and ornament thereunto." This is performed in some degree by the honest and liberal practice of a profession, when men shall carry a respect not to descend into any course that is corrupt and unworthy thereof, and preserve themselves free from the abuses wherewith the same profession is noted to be infected; but much more is this performed if a man be able to visit and strengthen the roots and foundations of the science itself, thereby not only gracing it in reputation and dignity, but also amplifying it in perfection and substance."

I trust that everyone present will feel disposed to utter a hearty amen to the sentiments of Lord Bacon. If so, and we proceed to model our lives upon such principles, and give our profession the best we have according to the light vouchsafed to us, then, humble though our part may be, when the time shall arrive for us to lay aside the cares and responsibilities of active practice, we will be enabled to do so without any misgivings and feelings of self-condemnation on our part, but rather with the assurance that the age in which we have lived, the community, and our profession are all some little the better for our having lived and toiled therein.

TUMORS RESULTING FROM SEPTIC PULP OF TEETH.

By G. LENOX CURTIS, M.D., New York.

The object of this paper is to illustrate several of the most prevalent tumors of the jaw, evolved by septic material discharged from the decomposing pulp of the teeth.

It is the intention to speak of them from a practical standpoint, and the desire is to inform those interested how to treat and prevent their recurrence.

Experience leads me to believe that the origin of fully ninety per cent. of all tumors of the jaw, face and neck can be traced to diseases of the teeth, and in many cases to the septic pulp. The most common of these tumors is the alveolar abscess, the contents varying from mere gas to thick pus. The treatment has been described so often that I shall not here repeat it, further than to say—remove the cause, and prevent recurrence. This can be done by cleansing the pulp canal, filling it perfectly, dissecting away the sac, roughening the surface of the bone sufficient, and promoting healthy granulation to fill the cavity. Another treatment is by extracting the tooth; this course, which is so often considered

sufficient, does not always effect a cure. Whenever a decomposed pulp exists a cavity in the jaw will be found, at or near the apex of the root. The exception, I believe, is only when the peridental membrane has not been inflated so as to produce an abscess sac, but has immediately succumbed to the septic influence of the pulp, the gas passing through the canals of the bone to some remote part, and there forming the tumors. This may be so gradual that the attention of the patient has not been called to it, except by the soreness and swelling that might result from the primary attack, and is recalled by the patient only when questioned about it. These cysts may be simple or multiple, and I have seen as many as three in one-half of the upper jaw.

Whenever the pulp of a tooth is found to be devitalized, and is not removed and filled as suggested, you can depend upon its causing trouble; then no time should be lost in preventing infiltration or increase of the area of the disease.

At this writing, I have under treatment three cysts of extensive proportions, which are traceable directly to this cause. In the first case the swelling appeared in the nose, plugging the left nares, along with a perceptible enlargement between the internal canthus of the eye and the wing of the nose. Searching for the cause, I found the pulp in the first bicuspid dead and putrescent. This tooth was extracted by patient's dentist, who claimed he did not find it abscessed, and the tooth, being of good quality, was cleansed, filled and replanted. The swelling somewhat diminished, but recurred in two years much increased in size. Examination of the alveolar process showed a normal condition. An opening was made into the tumor under the lip, in line with the wing of the nose, from which exuded a half ounce of thick greenish mucilaginous fluid. The sac had gradually increased until the substance of the superior maxillary bone had been destroyed from the point where I entered the sac to the nasal process, leaving only the periosteum intact. Even the inferior turbinated bone was destroyed. The walls of the nares offering the least resistance, the tumor gradually followed that direction until the left nares were completely plugged. The sac was curetted, and the cavity treated and healed; care being observed to force back the periosteum so that the normal opening of the nares was restored.

The next case was where the pulp in the left central incisor had for many years been dead, presumably from a blow, as there was a slight fracture on the cutting edge. The pulp was opened into from the palatal surface of the tooth, and fully two drachms of pus flowed therefrom. The pulp canal was then cleansed and permanently filled, an incision made through the gums and periosteum from the labial surface, exposing the end of the root of the affected tooth. A deluge of a thick, yellowish fluid flowed into the mouth

—in all two ounces. It was found that all the bone extending from the right lateral to the left first bicuspid to the anterior boundary of the antrum and the nasal process was completely absorbed, leaving only the periosteum intact. There was also considerable bulging of the left nares and the roof of the mouth. This almost plugged the left nares; in fact, the floor of the nose was considerably elevated, and the bone under it was completely destroyed. Fully two-thirds of the roots of the central incisors, left lateral cuspid and first bicuspid teeth penetrated this cavity. The patient never realized any trouble from this tumor, except occasionally for several years a little tenderness on pressure at the side of the nose, until about one month since, when the face suddenly swelled and was diagnosed by this dentist as the result of an alveolar abscess attached to the root in question. When the sac of the tumor was dissected away, it was found that immediately surrounding the affected tooth there was an independent sac, which was similar to that found in alveolar abscess, and which contained the pus referred to.

The third, which was still more extensive, involved all the alveolar process, of the left superior maxillary, from the wisdom tooth to the lateral incisor and extending to the molar. The face was considerably deformed by an enlargement below the molar about the size of a small hen's egg, which was apparently as firm as bone. Nearly the entire antrum was found occupied by this tumor, the contents being almost a jelly, of a slightly yellowish color, in quantity about three ounces. The etiology of the tumor, I believe, to be traceable to the back roots of the second molar, which had many years remained in position and were found penetrating the cyst.

These tumors are, fortunately, not numerous, and would be much less so if dead teeth were properly treated or promptly extracted. I could cite many cases of adenitis and inflammation of the ducts, also the bursa of the floor of the mouth, of osteoma and similar ailments, traceable to septic diseases of the pulp of the teeth, but I feel that it is not necessary to here dwell, or to impress you further on the importance of prompt and thorough removal of any such influence in the mouth.

Before my class, in the New York Post Graduate Medical School, in February, 1888, I operated on a case, which illustrates clearly the lack of judgment of the dentist who filled a cavity over a septic pulp. The patient had the inferior left first molar filled with amalgam, from which the pulp had not been removed. The day following this filling the jaw around the tooth became sore and the face swollen. This condition continued to increase for several days. For two or more weeks she suffered much pain, when the swelling gradually diminished, leaving an indurated

tumor near the apex of the roots, which continued to increase in firmness, and constantly distressed the patient.

At times the pain was quite severe. From the first of the trouble the patient was advised by the dentist to have nothing done with the tooth, as it was not at fault, while the physician and others advised its extraction.

Two years later the patient consulted another dentist, who extracted the tooth, and found it in the condition as heretofore stated.

This, however, did not check the growth of the tumor, which gradually increased in size until the face was considerably deformed, as shown in the photographs taken before and following the operation. I was able to enucleate the tumor and here present it. From its size, you can readily understand that the jaw-bone was nearly severed, there being not more than a quarter of an inch of the inferior border remaining, so completely had the growth of the tumor destroyed it. You will see that the tumor is osseous, and has been sawed in two to show its structure.

The operation was done from within the mouth, thus avoiding the usual scarring, so disfiguring when the opening is made through the face.

The case had been diagnosed a "sarcoma" and the removal of half of the lower jaw was advised.

A CASE IN PRACTICE.

In April, 1896, a young man, 20 years of age, applied to me for the extraction of an inferior right third molar, complaining of its being abscessed and causing a very disagreeable odor.

On examining, I concluded to extract, but finding it impossible to get at third molar I extracted second molar and then third. My reasons for coming to such a conclusion were the presence of a chronic abscess and also a very marked presence of necrosis, which I detached by the use of a probe, also the dead bone fetor (which latter, I think, is unmistakable). After I had finished the extraction of the third molar, there was a very copious flow of pus into the oral cavity, and its odor was, I can assure you, very far from pleasant.

I syringed socket with peroxide of hydrogen several times until the effervescence ceased, after which I used probe once more and detected the presence of quite an extensive sequestrum which I removed, and afterwards scraped the surface of the bone pretty thoroughly, so as to remove the necrosed portion as much as possible. I then applied aromatic sulphuric acid, and packed sockets

with carbolized gauze, and having made an appointment for the following day, dismissed him; however, as he was not suffering any severe pain, he did not again put in an appearance for two weeks, when his mother called to inform me that he was confined to his room and suffering considerably. I went to see him, and found quite a swelling at the angle of the jaw (which, however, was not caused by the gauze, as he had removed that), and a very marked presence of dead bone fetor, but, on probing, could not detect presence of any sequestra. I packed cavity again with carbolized gauze, after having thoroughly cleansed it with an antiseptic solution (permanganate of potassium 10 grs. to the oz. of water),

I went to see him the next day, and found him quite comfortable, but face considerably swollen. I removed gauze and also removed two pieces of necrosed bone and burred the surface away with engine and large round burr, and, after having washed out cavity with permanganate of potassium solution, I packed again with gauze. He then came regularly to my office for five or six weeks. I applied aromatic sulphuric acid, and syringed out cavity with solution at each sitting, packing with gauze until last two or three visits, when cavity had about, if not entirely, closed. I then dismissed him as cured, the swelling and the little teat-like enlargement under the jaw (at the angle, which I understand to be one of the characteristic diagnostic signs of necrosis) had disappeared.

I asked him to report at once on presence of any signs of the return of his trouble, but I had not heard from him until January 26th, when he came in complaining of an uncomfortable sensation in lower lip whenever he swallowed or took a drink of cold water. After probing I located another small fragment of dead bone, which I removed and freshened the surface of bone with a burr and scraper. I saw him every day for three or four weeks, repeating same treatment as formerly. I have not required to treat again since the end of February, and I think I have succeeded in overcoming the disease, as I saw him on the street only last week, and he informed me he has not been troubled in any way since he was last at my office.

[As the author of above omitted to sign his article, we would be glad to announce it in next issue.—ED. D.D.J.]

TO CONTROL HÆMORRHAGE AFTER EXTRACTING.

By M. K. LANGILLE, D.D.S., Truro, N.S.

In the February number of the DOMINION DENTAL JOURNAL I noticed "A Severe Case of Hæmorrhage," by Dr. Hallett, of St. John. My method for such a case is to mix ordinary dental plaster quite stiff and with a tightly rolled ball of absorbent cotton press the plaster, one *piece* after another, into the alveoli until the bleeding stops. If worked skilfully it acts like magic, and a fair trial will convince the most skeptical. I have employed this method for the last ten years, in which time I have had a number of very severe cases, but have controlled the worst I have seen in from five to ten minutes time. The plaster requires no further attention, which is a great advantage over a plug of cotton or other material. As the wound heals the plaster is thrown off without having caused the least irritation.

DIED IN THE CHAIR WHILE CHLOROFORM WAS ADMINISTERED TO PERMIT TOOTH EXTRACTION.

By L. D. S.

A sudden death under peculiar circumstances occurred about ten o'clock on the morning of the 15th of last month, when a Mrs. Sullivan, of Kingston, Ont., widow of the late Thomas Sullivan, died while under the influence of chloroform.

As per arrangement Mrs. Sullivan, accompanied by her son-in-law, entered the office of Dr. Daly for the purpose of having some troublesome teeth extracted. Dr. Bell, her regular physician, was summoned to administer chloroform, which anæsthetic the patient asked for. Dr. Bell, made a searching examination on the bared chest of the lungs and found them, apparently, in a healthy, normal condition. He then slowly administered equal parts of chloroform, ether and alcohol. When under control, the dentist was led to remark that he had never witnessed a patient whose pulse remained so strong while anæsthetized. Dr. Bell says the patient's pulse was then at seventy-two and she was respiring easy. A moment later, as the dentist was preparing to operate, he noticed that her respiration became somewhat irregular and labored. He at once began administering restoratives and sent at once for other medical assistance, Dr. V. Sullivan responding. Meanwhile the pulsation of the heart

continued firmly, but respiration became more difficult. This continued for at least ten or twelve minutes, Drs. Bell and Sullivan doing their utmost to restore consciousness. Artificial respiration was resorted to, but to no avail; the heart ceased beating and earthly means proved of no avail to induce it to resume its function.

Dr. Bell says death was due to failure of the respiratory organs. In making his examination before administering the anæsthetic he found her heart strong, and this conviction is strengthened by the fact that the heart continued its pulsations long after the patient had collapsed. Dr. Sullivan says it is a case that might happen daily. While in England and on the continent he witnessed several deaths under exactly the same conditions, the medical attendants being the most skilful in the world. Similar cases have occurred at the general hospital, but not within the past few years.

Coroners Phelan and Kilborn were summoned. The last named upon making a superficial examination and learning the facts of the case from the two physicians, decided that an inquest was unnecessary. To Coroner Phelan, however, later on, friends of the deceased asked that an inquest be held. Upon consultation with the County Crown Attorney he granted the request, and at once a jury was summoned to meet.

The jury adjourned to the residence of deceased's son-in-law, W. Geoghegan, corner of Earl and Wellington streets, where, after viewing the body, they elected J. J. Behan foreman, and were duly sworn in by the coroner.

Returning to the police court chamber, Coroner Phelan explained that in order to expedite matters he had ordered Dr. W. T. Connell to make a post-mortem examination of the remains. He intended calling only Dr. Connell, whose evidence, he said, would show that death was due to causes other than chloroform.

Dr. Connell testified that upon making an examination of the body he found in the main blood vessel leading from the heart to the head, at a spot near where smaller blood vessels branch off, an aneurism, or rupture, which had allowed blood to flow into the left lung, causing death. About a pint and a half of blood was found in this lung. A portion of the backbone near the spot where the rupture occurred was also found in a diseased condition, and which had been affected for some months. The affected part of the backbone had rotted away, but this would not at its present stage cause death. It would be impossible for a physician to detect the aneurism of the blood vessel, as it was protected from the back by the backbone, and from the front by the breast-bone, lungs, etc. A sudden strain or excitement resulting in increased action of the heart would cause this aneurism to burst, causing death. The heart was perfectly healthy, large, but not unduly so for so large a

woman. The brain was also quite healthy. Some of the organs of the body showed signs of disease, but not in such an advanced state as to cause death.

In answer to a question Dr. Connell said that excitement causing increased action on the part of the heart, would cause the aneurism to burst. Death is the termination of an aneurism. Chloroform would not cause the rupture. From its location and size it was quite impossible to detect the aneurism externally. The action of chloroform would cause increased pressure in the blood vessels.

This was all the evidence taken, and in summing it up Coroner Phelan pointed out that an inquest in this case was an imperative necessity in order to clear those most interested from all stigma. Hereafter relatives of the deceased might say that death was due to chloroform, but the very searching post-mortem examination made by Dr. Connell revealed the true cause of death. Before administering the anæsthetic Dr. Bell had made a very careful examination, as was corroborated by Dr. Daly. Coroner Phelan likened the rupture in this case to the bursting of a hose in a weak spot when pressure became too great, and pointed out clearly that the aneurism could not be detected from a superficial examination.

The jury, while in secret session, cross-questioned Dr. Bell for upwards of fifteen minutes. After deliberating for about half an hour, this verdict was rendered:

"That Mary Sullivan came to her death by the bursting of a diseased blood vessel. The jury exonerates both Drs. Bell and Daly from all blame."

Notes by Dr. Daly: "It will be noticed that death was not directly due to the anæsthetic, and would probably have resulted had any other mode of extraction been used, and as showing how easily a dentist may be the victim of circumstances. Had I been alone with the patient and used any local anæsthetic, and the same results followed, the popular first conclusion would have been very unjust and erroneous.

"With the light of the past circumstances I think it would always be best for the dentist under such conditions to at once call in a reliable unbiased coroner, and if he thinks advisable, have a post-mortem and let that decide the necessity of an inquest. It has been found that the coroner's fees and jealousies (he being a physician) may cause him to institute unnecessary proceedings to the detriment of the attending physician, and which reflect upon the dentist as well. In this case the post-mortem was as far as it should have gone."

HINTS IN HOT WEATHER.

By A LAZY MAN.

If you add two per cent. of silica to gold plate to be melted, you can accomplish it over the flame of a common candle.

Apply powdered or lump resin to the driving belt of your engine, to prevent it slipping.

If you remove gum blocks from the flack, and rub the joints very lightly over fine sandpaper before replacing them, they can be packed much cleaner. Where there is any vestige of wax there will be unclean joints.

Wash your amalgam with a few drops of sulphuric acid added to water.

For sterilizing instruments, boil them for five minutes in a one per cent. solution of carbonate of soda. It will preserve them from oxidation, as well as make them aseptic. I like the Empiric sterilizer.

Do not use spunk for drying cavities unless you are sure it leaves no *debris* behind. Do use it often instead of the rubber dam. It is handy on the tweezers as a conveyer for large amalgam filling in posterior cavities. Very useful, too, to smooth off ends of filling.

Oxyphosphate is the best thing with which to repair broken teeth of plaster models, if you can wait an hour till it sets. Cut strips of the various grades of sandpaper you use with the split mandrel of your lathe. Fit them in tight. Slip them off. Glue them, lay aside for use. Also cut down corks to cones, glue on pumice or corundum stone. A very coarse English corundum stone makes one of the best coarse polishers.

Keep your corundum wheels out of the hot sun.

Dr. C. H. Land, of Detroit, once told me that he found heavy pasteboard makes a capital vulcanizer packing, and that where vulcanizers leak, dusting on corn starch will stop it.

When you use alcohol to cut or sharpen a corundum wheel do not attempt to use it until it is absolutely dry.

To keep your solder in place, add a little gum arabic to your flux, and rub with the borax and water on the slate.

To make sticky wax for holding clasps in place, use resin two parts, beeswax one.

ADVERTISING.

By W. V. COWAN, L.D.S., Regina, N.W.T.

The desire of that portion of the public unenlightened upon the art of dentistry is towards false teeth. The desire of the dentist is toward preservation of the natural teeth. The tendency is toward false teeth. Are we dentists losing our grip upon the intelligence of the people? If we know that it is in the interests of the people to save their teeth, and they for any reason heedless of our warnings wilfully allow the destruction of them, it then must be admitted that our control of their reason is very slight.

There is not a dentist in Canada but what knows that ninety-five per cent. of all teeth could be saved had the dentist had an opportunity of attending to them before the caries had proceeded further than a reasonable distance. We know that a large percentage of the fillings now inserted are nothing more than an experiment. Hoping for the best, we expect the worst.

Now, why do people allow their teeth to get into that condition when to fill them becomes an experiment? Ignorance cannot be pleaded after the years of dental education without reflecting upon the dentists. Following ignorance, only fear and expense are left, and of these I believe fear is the chief cause. Millions have allowed their teeth to go to ruin through dread of the dental chair, with the result that to-day false teeth is the cry everywhere.

What are we dentists doing to counteract this wrongful tendency? Do we hear of men devoting all their energies to the discovery of obtundens in order to remove the chief cause of the failure of dentistry? Do we see page after page of our journals taken up with advertisements of new discoveries that allay the sensitiveness of denture? Do we find painless filling advertised? I rather think that we are devoting our energies to assisting the public to do what we know they ought not.

How many teeth is the brazen sign of "Painless extraction done here" going to fill? Is it not encouraging to people to persist in their determination to ruin their own mouths. A wholesome dread is the only thing that will conquer the foolishness of some people. Are we removing the dread and increasing the foolishness? Are we merely a protesting party to the slaughtering of teeth? I believe we are worse. To my mind, if we would have the people travel the road we would like them, we must remove the obstacles leading in that direction. Painful extraction is not on that road. Painful filling is, and until it is removed dental murder will go on and china shops will rattle triumphant in people's mouths.

PHOTOGRAPHY IN DENTISTRY.

By W. A. SANGSTER, L.D.S., Port Perry, Ont.

I am not aware whether many of my confreres are amateur photographers or not, but if not, they miss one of the pleasantest recreations. However, the object of this paper is not to describe its many advantages as a hobby, but its uses in dental surgery. Orthodontia—I always take a model of the jaw both before and after regulating, and, using a black cloth as a background, photograph them. Also, I photograph patient's face, front or side view both before and after regulation. This latter shows frequently a greatly distorted outline, especially about the nose and cheeks before operating. Afterwards the vast improvement in personal appearance. From the negatives, lantern slides may be obtained, and these thrown upon sheets at any of our association meetings, by means of a good magic lantern, will very beautifully illustrate a paper. Views may be taken of patients before and after plastic operations for cleft palate and hare-lip. Photographs may be thrown on the screen of gold contour work, models before and after insertion of bridge work, and so on *ad infinitum*. I firmly believe that "X Ray" photography, will, in the future, work a revolution in dental diagnosis.

A CASE OF TRIGUMNAL NEURALGIA.

By R. A. ALLOWAY, D.D.S., L.D.S., Bedford, Que.

Mrs. B.—had been treated by local physicians for some time, but with unfavorable results. When she consulted me, said if I could not give her relief she would certainly lose her reason. Could not sleep, and her face was in a fearful state from blisters. Examined teeth but found no immediate cause for such a state of affairs. Applied the following prescription externally (applied it myself) over trigumnal fifth and seventh cranial nerves, the result being magical. Saw patient sometime since, but she has had no return of the severe attacks, now four months since.

R Atropia ii gr.
 Acid acet ii m.
 Mentha ii gr.
 Aq. ad iii oz.

IMITATION GRANULAR GUM.

By E. A. RANDALL, D.D.S., Truro, N.S.

When using plain teeth and pink rubber, instead of finishing gum with file and sandpaper, use with the dental engine a large round bur (rather dull); a smaller bur in the corners between the teeth. With the rapidly revolving bur carve the gum festoons, moving first vertically and then longitudinally; as the carving process nears completion pass the bur lightly over the surface, then polish with brush wheels, pumice and whiting. This gives that granular appearance peculiar to the natural gum, and not a perfectly smooth surface.

Proceedings of Dental Societies.

N. B. DENTAL ASSOCIATION.

The annual meeting of the New Brunswick Dental Association convened in the Oddfellows Hall, Chestnuts building, St. John, on 25th August.

The meeting was called to order by the President, Dr. H. C. Wetmore. The minutes of the last meeting were read and adopted. The report of the Council was read by Dr. F. A. Godsoe. The Sec.-Treas., Dr. C. F. Gorham, then submitted his annual report. The President's address followed. Greetings were received from the Nova Scotia Association, in session at Wolfville as follows:

The Nova Scotia Association in session sends greetings to our sister society, and desires a joint convention next year.

Details can be arranged later.

(Signed) DR. J. A. JOHNSON, Parrsboro'.

The following reply was immediately sent:

New Brunswick Dental Society returns greeting to sister society. We are considering the joint meeting this afternoon.

(Signed) C. F. GORHAM.

Meeting adjourned at one o'clock for dinner.

An interesting, and to the assembled dentists, a valuable feature of the convention was the exhibit of dental goods supplied by the S.S. White Manufacturing Co. Upwards of 2,800 sets of artificial teeth are comprised in the exhibit, as well as every character of

dental requisites. The exhibit is in charge of Mr. C. A. Craft, of the Boston office, and Mr. A. J. King, the Maritime Provinces representative.

THE AFTERNOON SESSION.

Dr. McAvenny, St. John, read a paper of professional importance on the subject of Devitalized Teeth. The discussion that ensued was participated in by Drs. Robertson, Godsoe, Whitney, Somers, Murray, Barbour, Cates, Sangster, Magee and F. S. Belyea of Brookline, Mass.

This discussion was followed by another pertinent paper prepared and read by Dr. C. A. Murray, Moncton, on Points of Successful Practice. This practical subject was fully discussed, many of the delegates present taking a part.

The following by-law, prepared by the Council of the Association, was then adopted, as defining unprofessional conduct.

(a) No member of the society shall as a means to acquire, extend or retain practice as a dentist or dental surgeon, advertise by or in any newspaper, written or printed circular, sign or other document whatsoever, the price or any price at which he will perform any professional work. It shall not, however, be deemed to be a violation of this by-law for any member of the Society to inform either orally or by letter any person who may apply for the information as to the cost of any proposed operation or work.

(b) No member of the society shall in any way or by any means use or employ any deceptive, untrue or misleading advertisement.

(c) No member of the Society shall by or in any newspaper or written or printed circular, sign, or other document whatsoever advertise that he is entitled to any special or exclusive right or privilege not enjoyed equally with him by all members of the Society, to use in his practice any patent device, or patent or proprietary machine, tool, drug, method, practice or mode of operation.

Any violation of this by-law shall be deemed to be unprofessional conduct within the meaning of Sec. 1, of Chap. 109, of the Act of Assembly, 59 Victoria. This by-law shall come into force at once upon receiving the approval thereof of the Lieut.-Governor in Council, as by law required.

Dr. J. M. Magee, St. John, read a carefully prepared and highly instructive paper upon the subject, "Perfect Filling of Fast Decaying Posterior Teeth." A deeply interesting discussion ensued, participated in by Dr. Sangster, Dr. Cates and several others.

In opening the discussion; "Incidents of Practice," Dr. R. J. Robertson, of St. John, detailed a case of necrosis of inferior maxilla, and then followed a general discussion for an hour or more, during which time nearly every class of dental work received some mention.

Dr. Magee was appointed to collaborate the several papers, prepare a synopsis of each, edit the same and secure their publication in the journals of the profession.

The telegram received at the morning session from the Nova Scotia Dental Society suggesting

A JOINT MEETING NEXT YEAR

was taken up and discussed. The idea was approved of and Drs. McAvenny, Murray and Gorman were appointed, with power to add to their number, to confer with the Nova Scotia Society and arrange for such joint convention next year.

The election of officers was proceeded with and resulted as follows :—

President, Dr. H. C. Wetmore, St. John; Vice-President, Dr. B. H. Torrens, Fredericton; Secretary-Treasurer, Dr. C. F. Gorham, St. John.

Votes of thanks were unanimously passed to Dr. Gorham for his painstaking and efficient services the past year as Secretary-Treasurer; and to the Fredericton dentists for their care and labor in the arrangements for the annual meeting.

The Association then adjourned to meet next year as shall largely be determined by the conferences of the committee appointed to confer with the Nova Scotia Society.

COUNCIL MEETING.

Immediately upon the adjournment of the meeting, the Council of the Association went into session for the purpose of electing its officers. The votes taken resulted in the choice of, President, Dr. J. W. Sangster, Sackville; Secretary and Registrar, Dr. P. A. Godsoe, St. John. Examiners: Drs. C. A. Murray, Moncton; Dr. H. C. Wetmore, St. John: and Mr. Edward Manning.

DENTAL ASSOCIATION, PROVINCE OF QUEBEC— BOARD OF EXAMINERS.

The supplementary examination was held in Montreal during the second week of October. The following gentlemen passed: Messrs. Langlois, Versailles, O'Connor, Tutras, Rollit, and were granted their licenses to practise.

Dr. Globensky resigned the presidency and Dr. Ibbotson was elected in his place.

Drs. J. A. Munro and W. S. McLaren were granted the license on presentation of the diploma of D.D.S.

DENTAL COLLEGE OF THE PROVINCE OF QUEBEC.

Several changes have occurred in the College. Drs. Beers, Stevenson, Giles, Lovejoy, Bourdon, Dubeau, Leblanc, Gardner, Coleman and Franchere finally resigned their positions, and Drs. Fortin, Oliver, Brown, Saucier and Kent replaced them; Dr. Globensky being appointed Dean. Drs. Fortin and Oliver, respectively, take the chairs in French and English on *Materia Medica*, Therapeutics and Dental Surgery; Dr. Brown (English) Surgical and Dental Pathology and Hygiene; Dr. Saucier (French) Operative Dentistry and Crown and Bridge Work. Drs. Brown and Kent will lecture on Bacteriology, Electrical Science and Electro-Therapeutics; Drs. Oliver and Saucier on Anæsthetics and Irregularities. The other members of the staff remain the same. Any information desired can be obtained from Dr. Fortin, Secretary, 648 St. Denis Street, Montreal. We wish the new regime every possible success.

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

SWELLING OF THE PAROTIDS IN URÆMIA.—Richardière (*Jour. de Méd.*) describes this condition, which has not attracted very much attention. Swelling of the parotids is well known in certain intoxications, such as mercury, arsenic, etc., and in uræmia, which may be looked upon as a typical intoxication, it is also observed. The author relates a case of uræmic poisoning with dyspnœa and cephalalgia, in the course of which there was pain at the angle of the jaw, accompanied by swelling of the parotid region. Both parotids were attacked at the same time. The swelling lasted four to five days and then completely disappeared. These parotid complications in uræmia may be due to two causes: Greatly increased secretion, or chemical modifications thereof. Increased secretion is a frequent occurrence of uræmia, and a large number of cases of ptyalism are recorded, and in a case observed by Barié 900 g. of saliva were secreted in 24 hours. In the author's case there were no increased parotid secretions nor ptyalism, and in this instance, therefore, the parotid lesion would seem to be due to chemical alteration in the saliva. It is known also that in cases of deficient renal action the saliva contains a large amount of urea, and the parotid would therefore seem to have a certain vicarious action in some cases of renal disease.—*Brit. Med. Journal*, Aug. 21st, 1897.

"Is eczema ever reflex—particularly in regard to the teeth?" Most assuredly, as far as relates to separate attacks or outbursts of the eruption, as may often be witnessed on each accession of a tooth in those subject to the same. But as to causing the disease, it is impossible that the physiological process of extrusion of the teeth can have any real effect in inducing the skin to take on true eczematous action when previously healthy.—*Bulkley "on the Treatment of Eczema in Children." Archives of Pediatrics.*

BLOOD POISONING AFTER TOOTH EXTRACTION.—Dr. Port, of Munich, remarks that "when we consider the large quantity of micro-organisms which flourish in the mouth, it is extraordinary that dental extractions are not more frequently a source of infection." Dr. Miller's book cites only sixty cases, of which about half the number terminated fatally, while the other half recovered sooner or later. Death generally occurred from septicemia pyemia or meningitis. He gives a recent case of a young and vigorous man whose lower molar had been extracted by means of the key. He developed fever and died in four days. The autopsy revealed a large abscess in the neck, the pleural cavities held a large quantity of fetid brown pus, while the pericardium also contained pus. The abscess disclosed streptococci and diplococci and the latter resembled the salivary septicemic microbe described by Miller.—*British Journal of Dental Science.*

CAUSES OF BAD TASTE AND ODOR IN THE MOUTH.—The notion existing among the laity, and also among physicians, that gastric disturbances are almost exclusively responsible for a bad taste in the mouth, is wrong, says Dr. Herzfeld, in the *Therap. Monats.* (XI., 1). Only second to affections of the stomach as an etiological factor, are the tonsillar crypts, in which there accumulate mucus, dead epithelial cells and particles of decomposing food. These cheesy accumulations sometimes come out spontaneously and have a fecal odor. The reason they are so frequently overlooked is because they are concealed by the anterior pillars of the fauces and can be seen by only using a retractor. The treatment consists in removing the tonsils or in slitting the crypts open with a narrow curved knife. Among the other causes of bad taste the author enumerates: Carious teeth, inflammations of the mouth and the throat, adenoids, ozena, suppuration in the nose and accessory cavities, suppurative inflammation of the ear, and lastly, the cause may be of a nervous nature (paræsthesia gustatoria).—*Amer. Med. Surgi. Bulletin, July 10th, 1897.*

A TOOTH IN THE EAR REQUIRING REFLECTION OF THE AURICLE, ETC., FOR ITS REMOVAL.—Mr. G. Victor Miller reports the following: A. K., aged 10, complained to his mother, on May

2nd, of feeling something hard in his left ear. Dr. Glen saw him the same day, and with the aid of a speculum made out a pearly white body deep in the meatus. Placed under chloroform, and an unsuccessful attempt made to remove it. Three weeks after—failed again to remove it. Some discharge present, and the wall of the meatus bled readily when touched. Syringing with boric lotion was ordered to be continued, and glycerine and spirit drops used twice daily. Five weeks later another attempt failed, and as the father withheld his consent to further procedure, the previous treatment was continued. On July 7th an incision was made close behind the auricle, the soft parts stripped off the posterior wall of bony meatus, and cut through close to the foreign body. Then a few shavings were taken from the posterior bony wall, with chisel and mallet, which allowed the “searcher” being slipped behind the foreign body, and at the same time removing it easily. It proved to be an upper incisor tooth, with a broken fang, having a very sharp edge. Patient made rapid recovery. Three weeks after I removed a polypus from the meatus, and there was a good deal of discharge at this time. I again examined him on September 4th, and found the discharge much less; no granulations; has a slit-like perforation at upper and back part of drum membrane, which will probably heal. Hearing much improved. At no period had the patient any acute symptoms. He denies having put the tooth in his ear, though he says that some three weeks prior to making the complaint he pulled out a tooth one night in bed; then in some unaccountable way it got into his ear. With regard to foreign bodies in the ear, three rules should be remembered: (1) The surgeon should ascertain by inspection that a foreign body is really there. (2) Other than syringing, no attempt at removal should be made unless aided by mirror and speculum. (3) That a foreign body may remain in the ear for an indefinite period, and cause no symptoms other than deafness.—*British Medical Journal*.

INFLUENCE OF GENERAL DISEASES UPON THE TEETH (*Maryland Med. Journal*).—At a recent session of the Association for Internal Medicine, in Berlin, Dr. Neumann delivered an instructive address on this topic, presenting in evidence more than a thousand teeth. He held that the erosions began in children usually during the first five months of life. They are nearly always associated with rachitis, especially of the skull (Hutchinson's teeth not now considered). In Hutchinson's teeth the whole tooth is altered in shape by disease, being in this distinct from the normally shaped though thin and eroded teeth above mentioned. The Hutchinson's teeth are not only misshapen, but they stand away from one another, are turned on their axes, and lack the second of the three little hillocks which

form the cutting edge of each normal upper middle incisor. There is an antero-posterior valley where this hillock should be. There are several modifications of the Hutchinson's tooth of less importance. The diagnosis of syphilis founded upon the presence of Hutchinson's teeth can be certainly made only when rachitis is positively excluded, and this is sometimes difficult, because Hutchinson's are unfamiliar. In thirteen children hereditarily syphilitic Dr. Neumann found only four Hutchinson's teeth. Dr. Neumann then referred to the superficial caries of the milk-teeth which may begin with the very first glimpse of the erupting tooth, and which is often associated with nervous diseases; and closed with a description of the grey-green, or brown "circular caries" which attacks the milk-teeth very soon after their eruption and may attack even the bone below. He thought it was most frequently associated with "scrofula" or tuberculosis. In the discussion, Dr. Ewald stated that the staff of the Augusta Hospital Polyclinic, were, after long investigation, still doubtful whether a positive diagnosis of syphilis ought to be made from the presence of Hutchinson's teeth without other symptoms or history. To these reports, taken from the *Deutsche medicinische Wochenschrift* of March 18th, the writer would add that a prominent Baltimore dentist advises all of his patients who have had enteric fever to submit their teeth frequently to his inspection during the year following convalescence, because even the finest sets of teeth are apt to decay badly after that great fever.—*Amer. Med. Surg. Bull.*, Aug. 25th, 1897.

EMPYEMA OF THE ANTRUM IN A CHILD AGED EIGHT WEEKS.—Mr. D'Arcy Power reports the following interesting case: A wasting boy, aged eight weeks, was admitted under my care at the Victoria Hospital for Children on account of an abscess which had pointed and was discharging at the lower part of the right lower eyelid. The right side of the face was somewhat fuller than the left, and the skin of the lower eyelid and cheek was red and hot. A considerable quantity of pus could be squeezed out by pressure upon the cheek, and on looking into the mouth a small quantity of pus could be seen exuding from the alveolar, back of the upper jaw. A probe passed along the sinus in the cheek showed that the upper part of the superior maxilla was bare. I enlarged this sinus, scraped away some granulation tissue, and made an opening through the floor of the antrum, so that a drainage tube could be passed from the eyelid into the mouth. About a drachm of thick pus came away at the time of the operation, but the child died ten days after the operation. The child's attendant said that forceps had been used at its birth, and that after delivery both sides of the face were badly bruised, the right

more than the left. When the baby was a month old he seemed to have some difficulty in closing his mouth, and he refused the bottle. About the same time the redness and swelling appeared below the right eye, and eventually an abscess was opened by the medical man in attendance. The discharge of pus continued until the child was brought to the hospital. There had not been any case of infectious disease in the house. Cases of antral empyema in young children are extremely rare. Indeed, I can only find one similar case recorded in detail. The patient was a child aged two weeks, in whom the abscess pointed upwards immediately below the eye, and downwards on the left side of the palate. In this case, as well as another of which the doctor gives us no further account, the child was born with its face towards the pubes, and he attributes the abscess to the pressure exercised by the arch of the pubes on the face during parturition. Mr. Spencer Watson, in his work on diseases of the nose, also says he has seen two cases of abscess of the antrum in very young children in whom he had reason to suppose the mischief was connected with injuries received during parturition.—*British Medical Journal*.

Tit Bits from the Editors.

WE are of the opinion that the more the dentist knows of surgery and medicine the higher will be his appreciation of the surgeon and physician, and the more careful and the more able will he be to conduct his dental practice on the lines of his specialty, and avoid the pitfalls of a "little knowledge."—*Journal of the British Dental Association*.

THE union of the American and Southern Associations has been successfully accomplished . . . The complaint is often heard that the American Association always meets in the east, and is run by eastern cliques. Under the rules of the new organization the meetings are held in the west every four years.—*Western Dental Journal, Kansas City*.

THE near advent of the Dublin meeting reminds us forcibly of the rapid flight of time in the still young life of the British Dental Association, for nine years have sped swiftly away since that venerable gathering in 1888, when the ever-hospitable and friendly portals of the capitol of the Emerald Isle were thrown open in lordly welcome to the members of the association and its friends from all parts of the world.—*Journal of British Dental Association*.

IN another place we print an editorial from the *Record* in its entirety, as it has interesting connection with lectures delivered by us before the College of Quebec on the same subject, in which several cases were cited of vicarious menstruation coincident with the extraction of teeth.—*The Dental Record, London, Eng.*

THERE were present at the meetings at Old Point Comfort last month seven dentists who have been in active practice for fifty years or more. Dr. John B. Rich, of Washington, D.C., entered upon practice March 20th, 1836. Dr. Conylon Palmer, of Warner, Ohio, began in 1839. Drs. W. H. Thackston, of Farmerville, Pa.; Jonathan Taft, of Cincinnati, Ohio; and R. Finley Hunt, of Washington, D.C., began in 1842. Dr. Jesse C. Green, of West Chester, Pa., began in 1843. Dr. H. J. McKellop, of St. Louis, Mo., began in 1844. Dr. Rich is, we believe, with one exception, the oldest practitioner of dentistry, in length of service, in America; and Dr. Thackston is the dean of the holders of the degree of D.D.S. Well may the fathers of dentistry feel proud of the achievements of the profession they helped to nurture in its infancy; and well may the dental profession feel proud to know them. The *Dental Cosmos* greets them respectfully with head bared, and cordially wishes them the full measure of their hopes and aspirations.—*Dental Cosmos*. [“So say we all of us!”—ED. D. D. J.]

Selections.

A PERFECT FILLING FOR THE POSTERIOR TEETH.

By DR. JAMES M. MAGEE, St. John, New Brunswick.
Awarded a Silver Medal.

That the insertion of a perfect filling is of paramount importance to the majority of dentists, no one will question. The perfect filling for all classes of cavities has not as yet been discovered. To be perfect, it should be easily manipulated, easily introduced, easily finished. It should be readily adapted to the unevenness of the cavity walls, and be the color of the tooth. It should be a poor conductor of heat and cold, and be insoluble so far as the fluids of the mouth are concerned. Furthermore, and not least of all, it should retain its shape under stress of mastication.

Except for color, amalgam combined with cement as a lining for the cavity, fulfils all of the above requirements. Therefore in parts of the mouth remote from view it is a perfect filling.

The best results are obtained by using freshly filed alloy, and almost any of the alloys on the market is good enough, provided it does not contain too much tin. In all deep cavities where some of the partially decalcified dentine is left, it is best to varnish before using the cement.

In all cases where a contour is necessary, if practicable I use the rubber dam, and always a matrix.

Let us assume for illustration a large cavity in the approximal surface, involving the grinding surface of a molar and having the posterior cusps somewhat undermined and side walls frail. The method which I employ is as follows :

First prepare so much of the cavity as conveniently may be, for the removal of filthy deposits, and the easy application of the rubber dam. Adjust the dam on so many of the teeth as will permit easy access to the cavity, and dry the cavity thoroughly. Break down all the cervical wall removable with a flat stout instrument, using the adjacent tooth as a fulcrum. Often a cavity will extend one-eighth of an inch or more nearer to the alveolar process than at first suspected. Break away all frail edges, file and if necessary sandpaper. The only use I make of the engine in very extensive cavities, is in following out sulci, and smoothing the cavity edges with sandpaper discs, after trimming. After the margins are prepared, remove the remainder of the carious structure, and varnish dentine. Fashion a piece of thin sheet steel, such as may now be procured at the dental depots, to a contour of the lost portion of the tooth, with pliers, allowing it to extend a little higher than the tooth, and lay it aside.

Mix a little amalgam to a quite plastic lump and flatten somewhat. Mix cement to a thick creamy consistency and apply quickly, smearing it all over the cavity. Introduce the amalgam and quickly work it with ball burnishers and flat instruments till the cavity presents only a metallic lining. It makes very little difference how much cement remains under the amalgam, provided there is the merest film around the edges. With a sharp instrument thoroughly clear away the edges and fit in the matrix. Warm and pack a little gutta-percha around the matrix at the gum line to hold it firmly against the cervical margin. Mix fresh amalgam, and squeeze out all the mercury possible. Cut it up and pack with ball burnishers, using as much pressure as possible. Mercury will soon be worked to the surface. Remove this as often as it appears, and add fresh amalgam. As the filling progresses it will be found necessary to brace the ends of the matrix to keep them in place. Nothing will hold the ends quite so satisfactorily as the thumb and finger of the left hand. As pressure is made by the packing instrument, the natural resistance of the opposing fingers makes a perfect brace.

After the filling has been made somewhat higher than the tooth, carve the top of the filling until it is shortened about the height of the tooth. Remove the gutta-percha by sticking a heated instrument into it. Bend back the matrix ends, and if the amalgam has been properly packed, there need be no hesitation about grasping one end with pliers and pulling out sideways. Carve filling to perfect contour with the sharpest trimmers, and burnish tinfoil on to the filling to absorb the mercury, continuing until the tin will take up no more. Smooth the approximal surface by passing a waxed silk with pumice, or other polishing girt, between the teeth, and after making sure that no loose particle of the filling is left at the cervical border, remove the dam. Carve to a perfect articulation. Ten minutes polishing at a subsequent sitting will make such a filling "a thing of beauty and a joy forever." It will defy caries.

Where the patient's time was limited, I have frequently been obliged to fill at a single sitting, cavities in the anterior and posterior surfaces of a molar, both of which required contouring. In such cases after the first is finished, I separate the other space with the Perry separator and insert the second filling. The only effect of the intense pressure on the first filling is a little brightening of the surface, due to mercury. One thickness of tinfoil absorbs all that appears. This is a test severe enough for any amalgam filling.

Should the cavity extend so far beneath the gum margin that it is impossible to carry the dam beyond its edge, prepare and smooth the margins, and fit a matrix, smoothing its sharp corners and edges. Slip it to place and apply the dam. Then proceed with gutta-percha to hold the matrix against the cervical edge, just as if the dam had been placed on first. The only difference in succeeding steps is that more care must be used in getting such a thin layer of cement at the cavity edges as gives the best results, and in removing every vestige of cement from the very edge.

In ninety-five per cent. of amalgam fillings put in by me, I use a cavity lining of cement. The benefits of cement are five-fold; (1) it retains the filling; (2) it preserves the color of the tooth; (3) it prevents the metal from transmitting sensations of heat and cold to the pulp; (4) by its use we save valuable tooth structure, as owing to its adhesive properties we do not require so much cutting for anchorage; and (5) if caries should occur in any part of the tooth near the filling and should extend to the filling, it progresses less rapidly than if no cement had been used. Amalgam in contact with dentine in a live tooth discolours it, and by virtue of that very discoloration preserves it, but no one has yet seen the same happy effect follow the contact of amalgam with enamel. There may be a slight discoloration but there is also a

slight disintegration and as a result the tooth is an easy prey to caries all along the border of the filling. I care not how near the cement may be to the edge, in fact I take pains to plaster cement all over the cavity, but I also take the precaution of removing every particle from the very edge, after packing my first layer of amalgam, so that when the filling is finished, there will be no cement to dissolve out.

In cases where the pulp has been removed, the support received from the cement is of the greatest benefit, because the longer a tooth is pulpless, the more brittle it becomes. Amalgam directly in contact with dentine in a pulpless tooth, does not discolor with the result of preserving it, as in the case of a live tooth, and if no cement is placed under it, disintegration takes place sooner or later.

In cases where the teeth are firmly fixed, secure space by separating previously to the date set for filling if possible, otherwise great difficulty will be experienced in getting a proper contact with the adjacent tooth. In cases where the side walls are broken down it is always safe to secure space, but if the side walls are still standing and enough of the tooth remains to keep a correct contact between it and its neighbor, it is not necessary in young subjects to separate. The pressure of amalgam against the matrix is sufficient to counterbalance the little space taken up by it between the teeth.

In my experience the most humane method of securing space is by the use of the Perry two-bar separators. I have no wish to advertise these articles for the sake of the dealers, but if a greater number of dentists realized the wonderful benefits following their use, their patients would receive the blessing, and they would receive the patient's thanks. I had one of these separators ten years before I had demonstrated to me the proper use of it. Immediately I bought the others of the set, and since that time have had endless satisfaction. Separation may be secured in many ways, but with the exception of the tedious process of filling the cavity with gutta-percha and allowing it to remain for some months, there is nothing will move the teeth apart so easily and painlessly, and do so little damage to the teeth and surrounding tissues as the Perry separators.

Many forms of matrices are used and all have their advocates who obtain good results, but for contouring the approximal aspect of a tooth, standing in correct relation with its neighbors, the only universally satisfactory matrix is one cut and fitted to the particular case in hand.—*Items of Interest.*

Correspondence.

A FATAL CASE OF SEPTICEMIA.

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—Replying to yours *re* death of Thos. Scott in Galt Hospital, may say that immediately upon receipt I interviewed the medical doctor (Dr. Wardlaw) in attendance, and obtained the following information, which I will give you in his own words :

Patient, Thos. Scott, of near Branchton, farm laborer, aged 39, called for treatment on Thursday p.m. Condition—Found right sub-max. gland and cellular tissue swollen from ear to under the neck, around post-median line ; left gland slightly enlarged ; tongue pushed up and lower jaw almost immovable ; articulation so indistinct that little could be understood. Temperature, $102\frac{1}{2}$; could hardly breathe ; had eaten nothing since Tuesday previous ; fascia all swollen and infiltrated with pus. Fed him by nutrient enemata ; made incision on median line, also on the side of jaw ; slight discharge ; suffering then from "Ludwig angina." Could not get into the mouth to treat, but found an abscessed root. During Thursday night it broke in the mouth, and being unable to spit, part of the discharge ran into his stomach, and had a tendency to strangle him. On Friday a.m., unable to speak or swallow ; lymphatics over chest all streaked with red ; dulness over left lung ; teeth set and could not cough. Traumatic pneumonia apparent. Delirious at 2.15 p.m., Friday ; then gradually sank, and died in half an hour from inanition, the result of septicemia.

History of the case—Some time ago his tooth became sore and he was advised by either a medical doctor or a dentist (the former, I think) not to have it touched while sore. While attending Toronto Exhibition he caught cold, and felt somewhat indisposed until Tuesday preceding his death, when his face began to swell rapidly and the soreness in the jaw to increase. On Thursday following he called upon Dr. Wardlaw, as previously stated.

I am of the opinion that he was never seen by a dentist, either before or after death, and that the medical advice was given by a doctor in the village near his home.

I am, very truly,

SYLVESTER MOYER.

Galt, Ont.

Dominion Dental Journal

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VOL. IX.

OCTOBER, 1897.

NO. 10.

AN UNPLEASANT MATTER.

In the published proceedings of the R. C. D. S., of Ontario, appears a protest against the election of one of the members of the Board, "on the grounds of conduct unbecoming a member of said Board, corrupt practices and bribery," signed by a licentiate who was a defeated candidate for the position. We would have preferred to avoid noticing the matter in this journal, owing to the vagueness of the accusation, as well as the fact, that the gentleman accused bears a personal and professional character beyond reproach, and was not only re-elected a director of the R. C. D. S. over his accuser, by a vote of twenty to eleven, but seven months afterwards was unanimously appointed by the largest representative Dental Society in the Dominion, President for the ensuing year. The protester, however, sent us a copy of the letter upon which his charge was based, with a request to publish it, but as we conceived that its publication without other proof would probably lead our publisher into a libel suit, we proceeded in our own way to sift the matter and the motives to the bottom. Being referred by our correspondent for the fuller information we solicited, to another licentiate, whom it appears also had run against the accused in some official difficulty, and was also defeated in 1892, we were dumbfounded at the freedom

with which this gentleman expressed himself. It then dawned upon us that if the accused had written an innocent letter that could be made to appear corrupt, as many a man, and even the Apostles have done, there might be rivals ready enough to misjudge and misrepresent him, and that unless we searched, as a matter of fair play, for the motives of the charge, and for rebutting evidence, the publication in the JOURNAL would be, as it is in the Proceedings, entirely *ex parte*.

It has occasionally been our misfortune, ever since we began the JOURNAL in 1868, to refuse to let it become the medium of malice. When the ordained saints squabble and malign one another at times, it is no surprise that dentists should now and then follow their practice rather than their precepts, and few outside the charmed circle of the press can imagine the barrels of mollifying oil editors annually pour upon troubled oceans of water. In the particular case with which we are now dealing, without any knowledge of the *pros* or *cons*, with every desire to do justice, we confess that our two correspondents impressed us with the belief, that a good name had fallen, and that the owner had become a knave of the first water. Yet, one will not easily go back on a tried reputation, or soon lose faith in recognized integrity. Our correspondents insinuated, but we did not feel in a position to condemn one whose career and character had been unimpeachable. The immoderation of language justified the suspicion that their devil was perhaps not so black as they painted him.

We do not think it necessary to enter into the details of the protest. They may probably find ventilation elsewhere; but we consider that the eagerness with which our correspondents, both of whom owe a fatal defeat to a fair fight, combined to accuse an honorable *confrere* of bribery and corruption, was far from manly or gentlemanly. The accused not only occupies high positions of trust and confidence in the profession of Ontario, but as a town councillor, a leader in his church, and a citizen of distinguished merit, these libellous charges might, were he not well known, cause the ruin of himself and his family. In reply to our private communications, we received letters from the leading cleric and lay residents of his town, and no man in Canada could receive higher testimony as to character and reputation. Few reputations would be safe were any of us exposed to deliberate misjudgment, and misrepresentation in this way. The tendency to invest innocent actions with criminal intent, can be carried into the peace of any family, especially if one happens in an off-hand, unguarded way, to say or write what may be given a double meaning. In spite of this indiscretion or want of care in composition, we are fully convinced that the motives of the accused were perfectly innocent and transparent. We would be sorry to use the

"protest" as a boomerang, but to draw it mild, we would kindly offer the warning, that in jumping to a conclusion our correspondents may find they have committed a sort of suicide.

ONE PHASE OF MALPRACTICE.

We should like a few test cases submitted to the courts in the several Provinces of the Dominion to discover whether or not the greater part of the practice of the cheap Jacks is not wilful and ignorant malpractice, subjecting the practitioners thereof to heavy fines for damages, and the cancellation of their license.

What is the recognized first duty of the dentist, to save or destroy? There could hardly be a judicial or jury dispute as to the functional value of human teeth in comparison with artificial, and the duty incumbent upon licensed dentists to preserve the former. The surgeon who would amputate a finger on account of a wart, or a toe on account of a corn, would be no more censurable, morally and legally, than the miserable beggars who tempt the uneducated to have teeth extracted which could and should be preserved. The average untaught or unthinking patient, who finds that it will cost as much to have one or two of several carious teeth filled, as it will cost to have them all extracted, and an artificial set inserted, has a provokingly tempting inducement put before him to choose the latter. That, of course, is the chief business of the cheap Jack; and by slovenly work, cheap materials, and the employment of unlicensed and underpaid hirelings to do the laboratory labor, the quack, for he is nothing less, though he may be something more, in the nature of a first-class rascal, finds a daily profit in the accumulation of large orders for his rubbish.

Some of our friends differed from the opinion of Dr. C. N. Johnson at the last meeting of the Ontario Dental Society, that within the range of his experience he had seen more artificial teeth, according to population, worn in Ontario than in any other place he had ever visited. If the doctor had had the same opportunity in the Province of Quebec, especially in Montreal, he would have hardly found words to express his horror. The fact is not at all difficult of solution. We are cursed in Ontario and Quebec with more dental *abattoirs*, according to population, than can be perhaps found anywhere else in the world, and we make this statement advisedly. By shameful advertisements, by the exhibition in show cases—the latter only in Quebec—by the offer of "free and painless extraction," sets of teeth from three to five and ten dollars, the public has been educated in the press. From these alluring clap-traps a large part of the public get the only know-

ledge of the objects of dentistry. Many of our honest practitioners too, are not entirely blameless. They foster the fashion of the vulgar exhibition of conspicuous gold crowns; they caricature instead of imitating human nature. To-day we see refined and educated people exhibiting the vile vulgarisms and disfigurements of operative as well as prosthetic dentistry, and instead of leading they are lead by public vanity and vulgarity!

However, there is a wide gulf between this vulgarity and the wholesale slaughter of teeth which can and should be preserved. Whether a man will or will not wear a conspicuous gold crown, is not a serious matter. But whether he will or will not be persuaded to have his mouth slaughtered by the advice of a dentist, can certainly be proved to be a very serious matter. A few cases in the courts, a few hundred dollars damages awarded to a victim, this would "educate" public opinion in a startling manner. We should like to have some expressions of opinion on the suggestion.

WHICH "PAYS" BEST?

Is it, or is it not, in the interest of the profession, that it should be cleansed of the customs, which, however legitimate and enterprising in trade and commerce, are frowned upon in every country by every organized society of dentists? There can be no dispute on this question, because there has never been any doubt. The fact exists and has existed from the time that dentistry in the United States and Europe, became recognized as a profession. It has been a fact in every association in every province of Canada, and no one has had the temerity to venture upon its repeal.

The matter of quack advertising resolves itself into a question of individuality. Certain individuals do not take any stock in the "interests of the profession," unless they can use them as collateral booms to their personal interests. Given the opportunity to feed themselves at the expense of an Association, and there are individuals who would condescend to occupy any office, or shoulder any responsibility. It ought to be quite easy in every provincial society to checkmate such selfishness. A man who uses the public press, or any other form of advertising, to gain for himself notoriety or precedence he does not deserve, would use official position in the same way. We have seen this accomplished upon several occasions by men who, if they ever did anything for the profession, did mischief; and who ceased from interesting themselves in it as a body, just when they were unable to further their own interests. Loyalty to the profession had no inspiration,

when the opportunity ceased of loyalty to No. 1. And the consequence has been, that this class constitute the grievance-mongers in our ranks, who have a dog-in-the-manger existence, ready to conspire against established law and order, and defiant of all professional decency, by the length and the lies of their advertisements. This goes to show the importance of respectable practitioners strengthening the ranks of the provincial societies. Every man on the roll should count for the common ethical objects and customs to which these associations are committed. Every man out counts, whether he will or not, on the side of the enemy. It is the personal and professional interest of every one who seeks the respect of his *confreres*, and the confidence of the public, to ally himself with these societies. The public cannot be fooled forever, and the time is fast approaching, when those who have ignored the true interests of the profession, will find the bottom falling out of their pretentious public falsehoods. In one sense it may "pay" for awhile to be a charlatan, but in the long run it "pays" much better to be a man of honor, and to keep one's reputation unspotted from even the suspicion of humbug.

SIGNS OF DEGENERACY.

When that curse of the profession, Vulcanite, was first introduced into Canada, the average fee for a single set was forty dollars in Montreal, and thirty in Toronto. There was no more reason then than there is now, why this difference should exist, except we attribute it to the greater, at the time, gall of the eastern dentist. To-day, when the cost of living and practice has doubled, there are dentists who advertise single sets for seven dollars in Montreal, and four dollars in Toronto! At the time of the introduction of this base "base," it was commonly predicted that it meant the degeneracy of the ethical, as well as the financial interests of the profession, in a much greater degree than the use of plastics in operative dentistry. Amalgam, in spite of its practical merits, became a *bete noir*. The "Real Painless" practitioner has come to the fore, not only with immense professions of superior facilities and lower fees, but with deliberate falsehood and hypocrisy reduced to a fine art. The unseemly exhibition of conspicuous all-gold crowns; the mechanical monotony of a great deal of the prosthetic work seen in the mouths of the people we pass in the streets; the low moral tone of the advertisers who are ashamed to use their own names in the public press, and the lower moral tone of those charlatans who glory in their shame under their own names, all point to a down grade tendency. There are many who will always prefer to live

their professional and social lives on a high and dignified level, who will always have the self-respect of gentlemen, and the honorable desire that their occupation should be esteemed as something more professional than the business of the barber. The position of affairs is full of problems in the interest of the public as well as the profession. It is inevitable that the quack, who offers his services below cost, intends imposition on the public, by hook or by crook, and that his pretence of philanthropy is a disguise for his rascality. It is just as inevitable, that the reputable practitioner who is forced by circumstances to reduce his fees to a minimum, must lose heart and enthusiasm,

“ Dipping buckets into empty wells,
And growing old in drawing nothing up.”

Is there not some fear that human nature will not stand the strain, but that openly or on the sly, many an honest practitioner may reluctantly find himself competing on the level of the quacks?

THE WAY THEY DO IT IN THE U.S.

Another proof that we have a better system in Canada of electing the Dental Boards, by the votes of the registered members of the profession, instead of permitting the Governor to enjoy the privilege, is given by Jas. McManus, of Hartford, Conn., in an open letter to the *Cosmos*. The President of the Connecticut Dental Board was unceremoniously tossed aside to make room for a young, comparatively unknown dentist, without an adequate opportunity for the profession to be heard, “ a new comer who is not a graduate and who shows but little, if any, interest in professional affairs.” Dr. McManus writes feelingly of “ political bosses,” and states that examining boards “ may become a decided menace, rather than a benefit to the public and the profession.” We manage this matter better in Canada. We should as soon think of asking the Governor of our Province to appoint the members of our Boards, as ask them to accept the appointed members of our Board for their private secretaries. They would think we were weak-minded constituencies in either case.

SERVICE UPON JURIES.

It was early recognized by the Legislature of Quebec, that the dentists were entitled to exemption from service upon juries. Allowing for the more important claim of the medical profession in emergencies involving life and death, which gives them legal

and humane preference, it was admitted that as a branch of the healing art, in which appointments must be made and kept, involving the possibilities of severe suffering, and in some cases of probable mortality, there existed sufficient reason why the dentists should not be obliged to inflict upon patients the consequences of inability to fulfil their engagements. It was certainly very unselfish on the part of the members of the R. C. D. S. to reject the memorial of the Eastern Ontario Dental Association, to secure legislation granting this exemption to Ontario dentists. The privilege is much appreciated in Quebec, and if the members of any part of the profession are entitled to the exemption, it is certainly those of Ontario.

IT ought not to be necessary to say that the editor is not responsible for the views expressed by correspondents. Sometimes opinions are widely divergent from those of the editor, but it is just as likely that the editor may be wrong instead of the correspondent. Perhaps we are in error in the aspiration to clear the skirts of dentistry of unprofessional practices. Perhaps dentistry ought to be made a trade. But the chief objection to that proposal lies in the fact that the proposers are such rascals that they would lie and cheat all the same in a trade. However, let us air our opinions. Variety is the spice of opinion.

Reviews.

A Manual of the Injuries and Surgical Diseases of the Face, Mouth and Jaws. By JOHN SAYRE MARSHALL, M.D. (Syra. Univ.), Philadelphia. The S. S. White Dental Mfg. Co., 1897. 617 pages.

This well printed and profusely illustrated addition to the branch of dental literature, in which the late lamented Prof. Garretson pointed the way in America, and which Christopher Heath inaugurated in the Jacksonian Prize Essay of the Royal College of Physicians and Surgeons in 1867, will readily commend itself to the profession. Necessarily a work of this character displays its obligations to previous authors, and in fact, it is quite apparent that in a number of the chapters the author has omitted to tell us that Heath's "Injuries and Diseases of the Jaws" have been very liberally drawn upon, frequently with only slight verbal alteration. The work, however, will be appreciated by students for the pains the author has taken to introduce subjects belonging to the general

principles of surgery ; the microscopic study of bacteria ; the general principles of antiseptic treatment ; inflammation, etc. ; yet, it must be recognized, that so far as the diagnosis and treatment of the conditions to which the work mostly refers, a dentist not possessing regular medical qualifications, who would presume to meddle would be amenable to condemnation. There is no more mischievous man in the ranks of dentistry, than the smatterer in medicine and surgery who, by reason of "a little knowledge" and even the possession of an easily obtained medical diploma, ventures to rush in where none but surgical experts should tread. We are strongly opposed to such practice, and fortunately, we are not much afflicted in Canada with this sort of presumption. Having mentioned this as a warning to the practical dentist, it is only just to say that the study of such a work as Dr. Marshall's will tend to enlighten and broaden observation. In this direction and with this object in view, there are direct and collateral benefits to the practising dentist, who has frequent opportunities to observe pathological conditions in the mouth, before they may be known to the patient. The author has introduced at the end of each chapter a series of review questions covering the most important facts presented upon each topic, to be used by teachers and students as a basis for class quizzes. The illustrations upon bacteriologic and pathologic subjects were made from photo-micrographs specially for the author. We recognize some old familiar faces and illustrations which have haunted us through our literature for many years and which bear reproduction, but the original plates are excellent and abundant. The author expresses himself very clearly, and covering a very large field, has not been guilty of the great amplification which marred the work of Prof. Garretson.

LITERARY NOTE.

IN Appleton's *Popular Science Monthly* for August, Dr. T. D. Crothers considered "New Questions in Medical Jurisprudence," concerning the moral and legal accountability of inebriates, especially for their crimes and their contracts, and in regard to the extent to which their testimony and their confessions can be relied upon. The use of the Thyroid Gland in Medicine is of special and peculiar interest because, instead of having been deduced empirically like most other features in medical practice, it has been adopted as a logical conclusion from adequate premises. It is described in the August number of Appleton's *Popular Science Monthly*, by Dr. Paerce Bailey.

Dominion Dental Journal

VOL. IX.

TORONTO, NOVEMBER, 1897.

NO. 11.

Original Communications

TREATING WOUNDS IN THE MOUTH.

By L. D. S.

Wounded or tender projections of alveolus after extraction: cases of traumatic injury to the gingival margin from ligatures, clamps, badly-fitting crown and bridge work, rubber plates, regulating apparatus, etc. The slightest touch even of soft food making the patient wince, and rendering it impossible to tolerate the presence of even a perfectly adapted plate. What are we to do?

What do we do? Cut away the portions of the plate which impinge upon the tender parts; paint the tender parts with iodine; instruct the patient to leave the plate out of the mouth for a day or two—an inconvenience at best. Run the risk of having to renew the set, not to speak of the annoyance and loss of time to the patient.

A very simple and effective method, for instance, with a vulcanite plate pressing too much upon a sore part of the ridge, is to lay a thin layer of "quickcure," or any other efficacious paste, on interior of the plate in the spots corresponding to the sore places. It is at once soothing and healing; at the gingival margin, in hypertrophy, it is a capital thing to pack into pockets, even into flesh wounds. The olibanum has a wonderful healing power.

HOW DO THE TEETH GROW?

By B.

Just the same in one sense as the other infant structures. They select from the blood the materials they require for their composition. In all ages and among all races, and among all animals, this process of selection has gone on, each tissue selecting the material it needs and rejecting what it does not need. Same in vegetable kingdom. Down at Cacouna, in any rocky pool when the tide is out, you find little plants we call sea-weed, sipping from the mingled waters their daily dose of iodine. Housed sea-snails sucking from it carbonate of lime for their shells; restless fishes extracting from it phosphate of lime to strengthen their bones, and lazy-like sponges dipping successfully into it for silica to distend the mouths of their fibres. Year by year, up to mature age, the bones absorb more earthy salts, and the soft cartilaginous structures become harder and stronger, able to sustain the weight of the body; the muscles become firmer and thicker, skin more tense and thick, convolutions of brain deeper and larger as mental faculties develop and are exercised. But the teeth do not participate in this. The capacity for selection pervades every tissue and every organ of the living body, excepting the teeth. Food supplies nutrition so as to cause changes everywhere, excepting to the hard tissues of the teeth.

A TRICK WORTH KNOWING.

By W. D. KNIGHT, D.D.S., Cornwall, Ont.

I noticed that on damp, rainy days, the cord of my engine was tighter than on dry days. About a week ago the cord became so loose that when I applied pressure to the bur it would stop revolving, and the cord would slip around on the wheel. I took a wet sponge and held it to the cord till it was saturated, when I found that the cord had so shrunk as to be quite tight. I think that this is "a trick worth knowing" to a man when he is in a hurry and has not time to stop to shorten the cord. This is probably known to many dentists already, but I write trusting that it may be as new to many as it was to me.

AN OLD ERROR ABOUT DENTITION.

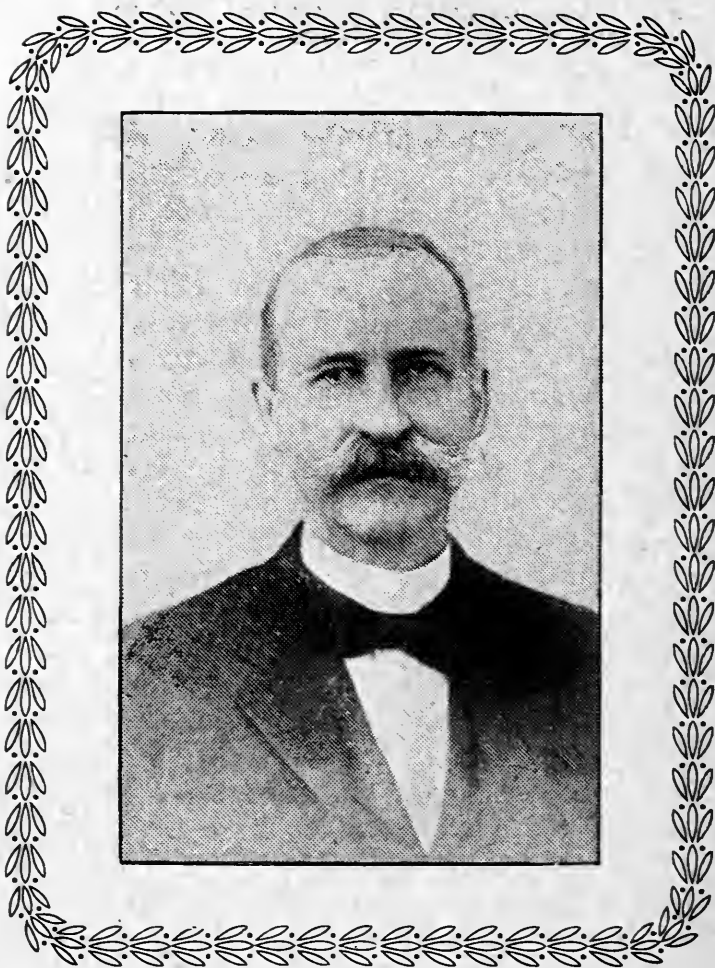
By B.

A common mistake, even among some physicians, is to classify the coincident disorders of teething as pathological. Teething is a normal physiological development, as much as child-birth. It takes place at an age which, for many reasons, is subject to a large number of diseases. The first dentition generally occupies the first two years of early infantile life, a period in which the child is peculiarly liable to numerous diseases, some of them of a dangerous character. Mothers and nurses were in the habit of anticipating pathological results every time a child was erupting a tooth. Pale and anæmic children were brought to the physician, with the belief that they were anæmic "because of their teeth," when there was clear clinical evidence that a slight catarrh of the intestines had been overlooked, and had degenerated into incurable ulceration of their follicles. To teething it was not uncommon to attribute inflammations of all the external and internal organs, the brain and its membranes, the air-passages and the lungs, etc., as also vomiting, diarrhœa and dysentery, emission of urine, etc. It was very common to find in the mortality records the report of many deaths "from teething." Children five years old, with both maxillaries full of teeth, were said to "die of teething." As well might we assert that the normal physiological process of menstruation or pregnancy are the direct causes of death. A child never died "from teething" any more than a woman ever died "from menstruation." While it is true that teething is frequently associated with pathological effects, and that serious symptoms may be present, it is still true that teething is a purely physiological process, and not in any sense the expected and natural cause of fever, diarrhœa, etc. Thousands of children erupt their teeth without any bad symptoms whatever. Even physicians regarded this as the exception to the rule. The causes of infantile disorders cannot be traced to the consequences of a natural physiological process.

Proceedings of Dental Societies.

THE DENTISTS' OPENING NIGHT.

Toronto Dental Society held its inaugural meeting on Tuesday evening, Nov. 9th. The following officers were installed: Hon. Pres., Dr. Eaton; Pres., D. A. J. McDonagh; 1st Vice-Pres., Dr. Ziegler; 2nd Vice-Pres., Dr. Swann; Sec., Dr. T. W. Trotter; Treas., Dr. Wunder. Dr. Swann read a paper on "Anæsthetics," followed by a discussion.



DR. THOMAS FILLEBROWN.

Canadian dentists in Ontario and Quebec who, at the opening of the Royal College of Dental Surgeons, October, 1896, had the pleasure of meeting and knowing Dr. Thomas Fillebrown, of Boston, President of the new National Dental Association, will be glad to see his portrait again. From the *American Dental Weekly* (October 14), published by Dr. S. B. Catching, Atlanta, Ga., we reproduce the following: "Dr. Thomas Fillebrown was born in Winthrop, Maine. Was educated at Maine Wesleyan Seminary. Graduated at the Medical School of Maine and the Dental School of Harvard University. For several years he was lecturer on dental subjects at the Portland School of Medical Instruction. In 1883 he was appointed Professor of Operative and Oral Surgery. He commenced the practice of dentistry in Lewiston, Maine, in 1861; removed to Portland in 1875, and since 1883 has practised

in Boston. He became a member of the American Dental Association in 1876."

We may add to the above the warm congratulations of the Canadian profession on the union of the two old associations, and the happy thought of electing as President, Dr. Fillebrown, whose well-known "power of suggestion" will be sure to convert wrinkles into dimples, and any pains of associative parturition into blissful delight.

Correspondence.

THE BRITISH ASSOCIATION MEETING IN DUBLIN.

To the Editor of DOMINION DENTAL JOURNAL :

Nine years ago, Mr. Editor, I had the pleasure of greeting you at the meeting of the British Dental Association in Dublin, and it renews my pleasure to give you a metaphorical shake of the hand over the ocean, and send you some jottings of our doings. It would be difficult, I think you will admit, to surpass the splendid success of the meeting of 1888 ; yet great educational and scientific progress has been made in the three kingdoms since then.

In educational matter we have, I think, much reason to congratulate ourselves upon our connection with the Royal College of Surgeons and the General Medical Council. In no possible way does it retard or interfere with whatever is necessary in practical education in dentistry, while it has established for us a higher standard of preliminary examination, and a social tone which every well-meaning practitioner must naturally desire in the interest of his profession.

The preliminary embraces, besides English, Latin, mathematics, comprising arithmetic, algebra as far as simple equations, inclusive; geometry, the subject matters of Euclid, Books I. II. and III., and are of the following optional subjects : Greek, French, German, Italian, any other modern language, and logic.

The professional education consists of instruction in the principles of general surgery and medicine, as well as in dentistry. The apprenticeship system of three years is retained, because it has been proved to be of great practical value, and I may say of ethical value to registered students, giving them an insight to the methods of office practice and conduct, and an unbroken curriculum from year to year. The professional education extends over four full years. The examinations which lead to the diploma from the Royal College of Surgeons, are divided into preliminary science, the first professional and the second professional. The

former requires chemistry, physics and practical chemistry ; the second general anatomy and physiology, general surgery and pathology, dental anatomy and physiology, dental pathology and surgery, and practical dental surgery. The written examinations comprise general dentistry and physiology, general pathology and surgery, dental anatomy and physiology, and dental pathology and surgery. The practical examination embraces the treatment of dental caries, the mechanical and surgical treatment of irregularities. There is also an oral. I do not pretend to specialize the minutiae of the subjects. The most thorough requirements are exacted as to regular attendance on lectures, clinics, hospitals, etc. In addition to the Royal College of Dental Surgeons we have three other examining bodies—the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Surgeons of Ireland. Instruction in dentistry is given in London at the Dental Hospital of London and London School of Dental Surgery, the National Dental Hospital and College, Guy's Hospital Dental School, while at ten other hospitals special provision is made for the general surgical practice and lectures required for the dental diplomas. Manchester, Liverpool, Birmingham, Newcastle-upon-Tyne, Devon and Exeter, Sheffield, etc., provide all necessary theoretical and practical instruction. Provision is also made for additional medical qualifications such as M.R.C.S. Eng., L.R.C.P. Lond., etc. It is only necessary to look over the *personnel* of the staffs of all these schools to realize that the selections have been discreetly made.

Our meeting in Dublin this year was pleasant and profitable. Dr. R. Theodore Stack, the indefatigable President, who has devoted over twenty years of his professional life to advance the position of the dentist, paid a very graceful tribute to Mr. Corbett and Mr. Moore, who have practiced for over sixty years in Dublin. I was much pleased with his remarks about Mr. Jas. Smith Turner, of London, of whom he said, "I believe we all feel that the man now living who has done most for our cause is Mr. Turner."

As the social element is a national characteristic of all British societies, I wish to quote some of the remarks at the annual dinner, which was held in the dining hall of Trinity College—Dr. Stack in the chair.

The toast of the "British Dental Association" was proposed by Dr. Lombe Atthill. "You are all well aware of the great achievements which medicine and surgery have made during the Victorian era, and I am satisfied that while other branches of medical science have advanced, perhaps the greatest advance of all has been made by dental surgery. It has not only advanced, but there has been a revolution." "The Dental Act, imperfect as it is, was a

very great step in advance, and that Act would never have been passed except for the energy and influence of Mr. Smith Turner and his colleagues."

Mr. I. Smith Turner spoke eloquently of the pioneer work of Sir John Tomes and Sir Edwin Saunders. The Act, he said, was the outcome of the labors of Sir John Tomes. Referring to the matter of education, I quote freely from Mr. Turner's remarks from our Association Journal (the *Journal of the British Dental Association*):

"It is a very difficult question to approach ; it has exercised both the Medical Council and our Association during the past year, but I fear that we are going sadly astray on this question of so-called education. You may train a man to be anything ; you may train him to be a skilful surgeon, a skilful dentist, or a skilful physician almost without his being an educated man. A trained man and an educated man are two different beings. We have a complex nature, and if we lose sight of our inner nature in our education we only train the acquisitive aspect of the mind, and I am very much afraid that our young men of the present day are being trained in that way. They are being trained to march forward to the clink of the guinea instead of marching forward to the music of the inward promptings of their individual selves. You may make a trained man, but if you follow this course of examination, if you allow science to put its iron grasp upon them to the exclusion of the education of their inner man, you will only get trained men. Science, let me say, has received an enormous impulse from such men as Tyndall, a countryman of yours, Faraday, Lord Kelvin, and that great and powerful teacher Huxley. Science has received an immense impetus of which it has taken full advantage. But science is strong, and it is arrogant and it is young. Let me tell you this, that the *literæ humaniores* is as old as humanity itself, and if you neglect that culture which cultivates your inner nature you will have trained men but not educated men. Your Banks and your Houghtons and such accomplished men will become scarcer and scarcer, and only the bare doctor or the bare surgeon or the bare dentist will encounter his patients, and not the men who can look on both sides of human nature, its spiritual and material side. Science is a great leveller, and you will lose individuality by the reign of science. What was it Tennyson said ?

" Knowledge comes, but wisdom lingers,
While I linger by the shore ;
And the individual dwindles
As the world grows more and more."

"Put the word 'cram' for the 'world,' and say that 'the individual dwindles as the cram grows more and more,' and you will

have the position of not only the medical profession but the dental profession as well. We must not forget that we have a soul to be educated. We feel we have a kind of religion in us that we must worship. Whether we worship god or devil we have sentiments within us that require training, and if we do not train those sentiments we will lose our self-sacrifice, we will lose our devotion, we will lose our professional patriotism—for I think there is such a thing as professional patriotism—and we will march forward, as I said before, to the clink of the guinea instead of our own higher aspirations. These are the thoughts that cross me when I think of the question of education, either for the dental, the medical, or the surgical profession.

“The poet has well said :

“Life and soul make wretched jangling, they should mingle to one sire
As the children's voices mingle in some old cathedral choir.

Soul, alas ! is unregarded ; brothers ! it is closely shut :
All unknown as royal Alfred in the Saxon neatherd's hut,
In the dark house of the body, cooking victuals, lighting fires,
Swelters on the starry stranger, to our nature's base desires.
From its lips is't any marvel that no revelations come ?
We have wronged it ; we do wrong it—'tis majestically dumb !”

“That is the position into which every member of our profession is driven if this grip of science is allowed to extinguish the higher aspirations to which we were at one time accustomed. It has put its hands now upon our curriculum year by year, and it has now put its iron grasp on our preliminary examination, and when I stand in this hall and address the members of this great and ancient university which has held up the light of literature through the dark ages of our country, I cannot help appealing to them, as one man to another, to make a stand to lighten this incubus of science, science, science, money, money, money, arithmetic and algebra, for with the commercial instinct on the one hand, and scientific pressure on the other, they are jamming the professional spirit out of us. Well, you may say, What has that to do with the British Dental Association? It has this much to do with it, that we start from the same platform in our professional career ; the preliminary examination is the same for the medical man as for the dentist, and that preliminary examination has been tampered with by the advocates of pure science, and I would ask the members of this great university to try, if possible, to claim for the preliminary examination of the student some of that higher education which makes a refined gentleman.”

Professor Purser (on behalf of Trinity College, Dublin), Sir George Duffey (on behalf of the Royal College of Physicians in Ireland) and Sir Wm. Thomson (on behalf of the Royal College of Surgeons, Ireland), spoke very sympathetically. Altogether

the banquet was one of the most enjoyable of the Association I have attended. A lot of solid, practical work was done, but the memory of real hospitality is, as you will agree with me from your own experience, something that one can never forget.

THE PAST AND THE PRESENT.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—In discussing the best way to eradicate quackery in practice and in advertising, I am not in harmony with some of your views, because in rebuking the present violators of the code of ethics, your rebuke must logically go back to the former acts of men who are among our most worthy. I remember the day when show-cases were so common that they were exhibited at Provincial exhibitions, and the best dentists competed for public prizes for the best display of mechanical work! That was not more than thirty years ago. I was glad, indeed, to see the last of that very unprofessional custom. Have we not to recognize the fact, that the times are changed for us as well as for everything else where men have to get a living, and that with the increase of population, and the accession to our number of many more dentists, we must expect the quack advertiser to thrive upon the credulity of the public. The quack advertisements in dentistry are only on a par with those in medicine. With all our faults, we have never in our history had one criminal in our ranks. Medicine and law cannot say as much in Canada.

Yours ———

[Our correspondent is illogical. Dentists who used show-cases, etc., thirty or forty years ago violated no code, because there was neither an organized profession, nor a code to violate. We doubt if the sin of Cain was as great a sin as that of ———. The Ten Commandments made penal certain actions which common law had left uncondemned. When we obtained from the Legislature professional distinction and privileges, it would have been as inconsistent as absurd to adhere to trade methods. We admit the correctness of the parallel between quack medical and dental advertisements, but as reputable medical societies ostracize from their privileges men who resort to these means of booming practice, so reputable dental societies should do the same. We do not propose to hang, draw and quarter these advertisers, or worry them in any other way than by protecting the public from their imposture. By and by such quacks will find it does not pay to lie. Even for them honesty will some day be found to be the best policy. That they would be influenced by the fact that it is the best principle we venture to doubt. If truth can be made to pay better than lying, they will tell the truth, even if it makes them ill to affect such an uncommon act of moral heroism.—ED. D.D.J.]

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S., L.D.S., Cookshire, Que.

"The lesson which I venture to think should be drawn is, that chloroform should rarely (save in cases of parturition) be employed as an anæsthetic."—DR. JENNINGS, *in the British Medical Journal*.

Dr. LEDOUBLE, Professor of Anatomy in the Medical School of Tours, who has long been making researches on muscular variations, announces that he has discovered ten new muscles in the human body.

EICHORN AND HEINZ, of Munich, have discovered a new anæsthetic of singular power; a preparation of "benzo-methylic ether," for which they publish the formula, and to which they give the name of "Orthoform." Used in form of powder it is said to extinguish the pain of deep burns, at present the despair of surgeons. The relief lasts many hours, and the application can be renewed with safety from time to time. No evil results followed a case where a patient, suffering from a terrible form of ulcer, had been sprinkled for a week. It has been administered in large doses to arrest the pain of cancer in the stomach.

ACUTE SEPTICÆMIA OF DENTAL ORIGIN.—The particulars of a case of acute septicæmia of dental origin are recorded in the *Transactions of the Manchester Odontological Society* of recent date. The patient, a girl aged 14, was first seen on Saturday, April 10, and was suffering much pain. Examination of the mouth showed that three teeth, namely, the left first maxillary molar (the region of which was much swollen) and the first right and left mandibular molars necessitated extraction. The teeth were removed without difficulty, and the patient made an apparently quick recovery. Soon after returning home she was seized with severe headache, the symptoms becoming aggravated as the day wore on. The swelling too considerably increased, the left eye becoming ultimately closed, and the right side of the face also affected. The patient became completely comatosed. On the Sunday, about 10 p.m. streptococcus anti-toxin was injected, but failed to relieve the condition, death taking place on the Monday morning about 7 o'clock.

ACTINOMYCOSIS CURED BY IODIDE OF POTASSIUM.—Duchamp (*Lyon Medical*, September 12th, 1897) records the case of a carpenter, aged 24, who had suffered for five months from a swelling in the left cheek, which varied from time to time in volume. Abscess formed and fistulous tracts developed, and opened on the

cheek. There was marked trismus, and Duchamp suspected that a wisdom tooth might be the cause of the trouble. Under chloroform the wisdom tooth was extracted; its eruption was imperfect. No pus, however, escaped when it was extracted, and the tooth was healthy. None of the fistulous tracts led to the alveolus around the tooth. These tracts were curetted. The swollen soft parts were as tough as wood, and Duchamp now began to suspect actinomycosis. A few days later tracts formed in the neck, reaching to the sternum; those which had been scraped began to cicatrise; but the patient refused any further application of the curette. He took iodide of potassium, beginning with half a drachm daily, and finally taking over a drachm and a half. At first cachexia threatened and the tracts increased, but at the end of two months they all cicatrised; the health was good and the trismus had vanished.—*Brit. Med. Jour.*, Oct. 9th, 1897.

MIXED TUMORS OF THE SOFT PALATE.—Berger (*Revue de Chirurgie*, July, 1897), publishes the following conclusions derived from careful study of cases of mixed tumors of the soft palate. These growths, he finds, form a well-marked group of tumors which possess distinctive anatomical and clinical characters. They take origin in the glandular structures of the palate, and are always enclosed within a capsule of connective tissue, which completely isolates them from the surrounding parts. They are made up of (a) epithelial elements, the arrangement of which resembles sometimes that of an adenoma, at other times and more frequently that of an epithelioma; (b) a stroma presenting varying forms of connective tissue, principally mucoid tissue and cartilage. The author's observations have led him to oppose the theory of the endothelial origin of these growths. Regarded from a clinical point of view these tumors are essentially non-malignant. They never take the same course or lead to the same results as true epitheliomata. This innocent character seems to be due to the suppression of the epithelial constituents of the growth by the development of the mucoid or cartilaginous tissue of the stroma. It is occasionally difficult to distinguish these mixed tumors from sarcomata, which, on the palate, may present analogous characters, such as a slow growth, a distinctly circumscribed form, and relative innocency. The sole reason for anxiety on account of mixed tumors of the palate is their gradual and persistent growth and their tendency to impair through compression the functions of adjacent organs. Their extensions towards the pharynx, the pterygo-maxillary region, and the parotid gland cause some difficulty in their extirpation, which, however, thanks to their investment by a capsule, may be effected by enucleation. Local relapses, when they occur, are always the result of incomplete

removal. The author finally alludes to other tumors of the palate, which, though in many respects analogous to the mixed growths, present a malignant aspect, and often perforate the palate and invade the nasal fossæ and the antrum. These growths, it is stated, need further anatomical research.—*Brit. Med. Jour.*

PEMPHIGUS OF THE MOUTH.—The eruption of pemphigus sometimes occur in the mouth and on other mucous membranes. That the disease in the mouth may precede that of the skin in the ordinary form of pemphigus—the chronic—is not generally known, though this is what invariably occurs, in a rare form, pemphigus vegetans, and that the disease may remain localized to the mouth and adjacent cavities for a long time, and in some cases entirely, does not appear to be at all recognized in this country. In the *New York Medical Journal* of July 3rd Dr. Lewis H. Miller describes a case in which the mouth was affected for twenty months without the skin being involved. The patient was a man, aged 72 years, who complained of soreness in his mouth and inability to take solid food. On the roof of the mouth and on the epiglottis were patches of false membrane of considerable thickness, which, when removed, left a raw, bleeding, surface. Some decayed teeth were extracted and antiseptics used, but blebs formed on the roof of the mouth, the soft palate, the cheeks, under the tongue, and on the posterior wall of the pharynx. Bacteriological examination of the membranes gave negative results. There was neither fœtor nor salivation. Whenever the patient attempted to masticate solid food a fresh crop of blebs appeared. We consider this fact of great interest and importance. It is perfectly analogous to what may occur in pemphigus of the skin; for local injuries, and even friction or pinching, will in some cases determine the formation of a bulla at the spot. No stronger confirmation of the diagnosis of pemphigus of the mouth when the eruption on the skin is absent could be given than this production of bullæ by such trivial exciting causes. Nothing of the kind, so far as we know, occurs in any other disease. Dr. Miller quotes a number of cases in which the disease existed for long periods, in one as much as eleven years, in the mouth before the skin was affected. The rare disease, pemphigus of the conjunctiva, may be very instructively compared with pemphigus of the mouth, because in the former disease also a skin eruption may be either absent or present. The treatment is similar to that of pemphigus of the skin, though it does not appear to be very successful. In the case given arsenic seemed to produce some improvement. Opium might be tried. Mr. Hutchinson has shown it to be distinctly curative in some cases of pemphigus in which the mouth is primarily involved.—*Lancet.*

Tit Bits from the Editors.

Dr. EDWARD C. KIRK, in the October issue of the *Cosmos*, repeats his frequent warnings on the dangers of chloroform when used as an anæsthetic for tooth extraction :

It has been stated, and perhaps with some degree of scientific authority, that chloroform as an anæsthetic in dental practice is peculiarly dangerous by reason of the more or less upright position of the patient during dental operations, which brings the increased stress of gravity to bear upon a heart muscle weakened by chloroform ; a condition not so apt to occur in the case of larger operations where the patient is anæsthetized in a recumbent or prone position. We know of no comparative statistics on that point, nor that there has actually been shown to be a greater danger attending the use of chloroform in dental than in general surgical practice. But that is not the point of first importance. What has been shown by statistics and emphasized by carefully conducted experiments is that chloroform may suddenly bring about paralysis of the heart's function and fatal syncope. If cocaine had been shown to be as poisonous a drug in dental practice as chloroform, measured by the fatalities resulting from its use, it would have been generally abandoned by the dental profession. But for some unaccountable reason, ignorance, carelessness, habit or otherwise, the reports of fatal chloroform poisoning come regularly along, and the coroner's jury continues to exonerate the participants in the crime with the same inconsiderate disregard of their responsibility for the destruction of human life. The *Dental Record* (London), September issue, contains circumstantial accounts of two fatal cases of chloroform syncope as shown by the evidence brought out at the coroner's inquest in each case : one that of a young man, seventeen years of age, who had chloroform administered for the removal of "half a dozen stumps of teeth." Death occurred during the operation. "The coroner said this was the second case within a few days that he had held. It was a wonderful thing that there were not more deaths. The jury returned a verdict of death from misadventure."

In the same journal appears the report of another inquest in the case of a woman, twenty-nine years of age, who died while having three teeth extracted during chloroform narcosis. The report states, "There was nothing in the condition of the patient to suggest any danger whatever. She was apparently a strong woman." Death occurred suddenly during the operation. "The patient became blue in the face and ceased breathing, and to all intents and purposes was dead in three or four minutes." The physician who

administered the anæsthetic testified that "it was quite a usual thing to administer chloroform in cases of dental surgery which occupied some time, and chloroform was as safe as any other anæsthetic. Death was probably due in this case to failure of the heart's action." As death and heart failure in this case seems to have occurred simultaneously it would perhaps be almost warrantable to say that the heart failure was due to death, but if we are to accept as correct the reported testimony of the physician it indicates on his part either a culpable ignorance of the history of chloroform poisoning, or else an attempt to shield himself from a grave responsibility by wilfully perverting the truth. The *dénouement* of the inquest in this case is, in the light of the present status of chloroform as an anæsthetic, grimly humorous, and we quote the closing paragraphs of the report *verbatim*. "The coroner, in summing up, said he did not think, from the evidence, there was any blame attached to either the operator or the doctor. There was always a certain risk in cases where anæsthetics were applied, and unfortunately this case was one of those where that risk had had fatal results. The jury returned a verdict of 'death from misadventure,' and expressed the unanimous opinion that no blame was attached to the medical man who administered the anæsthetic. They also expressed their deep sympathy with the family of the deceased in their bereavement."

We gravely doubt whether an American jury would have dealt so leniently in a case of similar character, or whether the bereaved family would have been satisfied with such a verdict, even though a resolution of sympathy were appended to it, had the case occurred on this side of the Atlantic. Why English practitioners will stubbornly continue the use of so dangerous an agent when records of its fatalities form part of nearly every issue of their periodical medical and dental literature is beyond comprehension. Surely human life is valued as highly by our British brethren as it is here, and their study of anæsthetic agents and their effects as well as practical use has been as extended and thorough as it has been here. But chloroform with all of its risks to life is still the popular anæsthetic in England, and as a consequence the harvest of victims still goes on. No better indication of the place which chloroform holds in relation to the surgical practice of Great Britain is needed than is shown by the fact that at least two of the prominent dental educational institutions of the country have on their staff of instructors specialists in the administration of the anæsthetic who are designated "chloroformists."

Fortunately the truth is beginning to shed its light into some of the English darkness on this subject, and it is a fact of hopeful significance that one of the best authorities in England on anæsthetics has unqualifiedly condemned the use of chloroform in den-

tal surgery as unsafe, and it is to be hoped that among other good things done and to be accomplished by the London Society of Anæsthetists this question may be further agitated until the use of chloroform is abandoned and the safer and equally efficient anæsthetics, ether and nitrous oxid, are generally and wholly substituted for it.

COLLEGE faculties are professional men. They teach dentistry, and a part of the pact with the student is that upon entering the profession he shall maintain the dignity of the college and obey the "code of ethics." There is no bond to bind the obedience, the diploma cannot be cancelled ; but the man who accepts knowledge on these terms and straightway manages his practice in a manner obnoxious to his teachers and in opposition to his promise, given or implied, cannot truly claim to be the most honorable man in the world, nor should he complain against the only penalty attached to his act—ostracism.—*Item of Interest.*

It is easy enough to run off a page or two without thought, but it is not possible to prepare an essay of five or six pages that will be interesting and instructive to a reader unless it shall have a central dominating thought. There is a growing tendency to write much to fill space, and too little effort made to make it full of substantial reasoning to convince the reader of the writer's ability and desire to convey something that will require a mental effort to grasp it.—*The Dental Review.*

Selections.

WHAT OF TO-MORROW ?

What fanciful, visionary, chimerical theories we cherished only twenty years ago ! Many really entertained the belief that caries of teeth is but the natural consequence of man's Adamic fall—that it is the result of our inherited and inherent sins. Some of us remember good old Dr. John Allen's annual diatribes against the villainous millers of the country, who bolt from our flour all the elements that should go to build up the dental organs, and leave our poor teeth starved and innutrient, to perish of inanition and deprivation. His faith in unbolted flour and dental calisthenics was strong as that of the religious devotee, and it carried him triumphant over the sloughs of scientific investigation, in which that one righteous "Miller"—he of Berlin—in company with the rest of the scientific world, was then floundering. John Allen, of

blessed memory, was of the type of those who believed that in the sweet pastoral days of the long-ago, when mills and millers were not and men lived on the bare bosom of Mother Nature, there was no toothache.

What wonderful advances we have made in the last generation. We sometimes wonder if there will be anything left for the next to discover. And yet, it is quite possible that our descendants, the speculative practitioners and the contributors to the dental journalism of 1925, will look with pity upon the benighted condition of the ignorant dentists of the last decade of the nineteenth century, and wonder how they could have believed in the filling of teeth with gold, and such like foreign substances, that could but be detrimental to their welfare, and to the general health.

By that time, perhaps, they will have ascertained in what consists the inherited weakness of the primordial germ, and will be enabled artificially to cultivate the human foetus to the point of developmental perfection. It may be that they will even have determined the degenerations of heredity, and be successfully engaged in eliminating from the female ovum all its perverse tendencies, while the spermatozoön, groomed, and clipped, and trimmed, and trained to that extent that it shall have lost all its vicious animal propensities, will be inspired only by the most virtuous desires for the improvement of its species. It will have begun exclusively to exercise its functions at the instigation of intellectual instead of carnal activities, and only after special and long-continued seasons of fasting, corporeal humiliations and mortifications of the flesh. Impregnation will not be permitted until a council of dental examiners, appointed by political governors as the fitting reward for party service, shall have decided that sufficient pabulum has been stored up to furnish, beyond all the contingencies of miscarriage, enough of calcific material to make a perfect system of dental organs. The male and female pronuclei of gestation will not be permitted to coalesce into the germinal radicle, until each shall be able to convince the special National Board appointed to inspect it, that it is fully equipped and ready for the proliferation of its share of the incoherent homunculus, and willing to demonstrate the modesty and purity of its intentions.

Then, when Madam Ovary shall give one of her inimitably attractive pink teas for the purpose of marrying off one of her daughters, and shall invite the brothers Testis to attend with all their spermatozoön family, at the same time intimating that their extrinsic representative will not be unwelcome as master of ceremonies and general usher, it will be a matter of solemn formality, and not the go-as-you-please, riotous rush of these days and nights of a low developmental plane. When that decorous era shall

arrive, what other needed improvements will not have been made? The self-assumed and legislatively educated skill of the dentist will be needed at every successive stage of existence, to bend, and sway, and coax, and repress any remnants of vicious dental tendencies that may remain. Committees and self-appointed Boards of an International Dental Society, will eagerly and tumultuously crowd in to assume domination over the affairs of their brethren, and by their importunity with legislators they will obtain the passage of laws regulating the precession of the equinoxes, the revolutions of the planets and the intellectuality of dental practitioners.

Over all these phenomena they will be authorized to sit in final judgment, ruling the living as did Rhadamanthus, Minos and Eacus the dead, an infallible conclave which shall decide who shall and who shall not be permitted to conjugate; who shall and who shall not enter into procreant life. What a world of trouble this will save the rest of dentistry, when these Boards shall take upon themselves, without fee or reward, and therefore without liability to error or temptation to dishonesty, the trouble of thinking for us, and of marking out the exact path from which we are not to deviate.

In that day of supplemental development the deficiencies of this formative period will have all been remedied. Each tooth will be made to grow according to the exact formula that its supervising national board of tittivators and regulators shall have determined the best adapted to the needs of the individual subject. Every man and every woman will be legislatively bound periodically to submit himself or herself to the critical inspection of the national board, to determine the moral status of their generative organs. At their discretion the individual members of this Board will order the administration of some specific stimulative preparation—say to the second inferior premolar—through a newly devised and patented cataphoric machine, until it shall develop into a sextupli-tuberculate organ, capable of comminuting into a digestible form shingle nails and plates of asbestos.

Or, perhaps further developing a nineteenth century Phœnixian suggestion, they will order a system of cog-wheels inserted in the molars, so that cubes of limestone, slabs of feldspar, crystals of quartz and concretions of kaolin may be ground up and ingested as pabulum for supplemental dentures, and people so be enabled to grow their own false teeth, without the necessity for the intervention of impression trays and vulcanizers.

In that day our schools and colleges will have been swept off the face of the earth, as unnecessary incumbrances and relics of the dark ages of dentistry, while their rascally, avaricious, nin-compoop professors will be set at hoeing corn, or turning the

personal grindstones of the members of the various boards, their own noses firmly held to them as lubricators. Men will be declared educated by act of the legislature and edict of the appropriate conclave, and there will be no further necessity for the old humdrum, perplexing and fatiguing curriculum of study. Possibly a few of the colleges may be retained for the purpose of conferring honorary degrees upon the members of the different Boards who are not already possessed of them, but there will be no necessity for six, seven and eight months sessions of a three years' term of dry study. What a blessed time for such professors as shall have been retained by gracious permission of the Boards! No more wearying lectures to deliver; no more midnight oil to expend in keeping pace with the advance of a profession in which erudition is but a mark of the favor of some specially appointed commission. At that time the prescient vision of the famous Dogberry will have become an established fact, and reading and writing will actually come by nature. What a glorious day will that be for our really honest colleges and professors, if any such there are! How should the heart of the teacher in this nineteenth century leap at the thought of it, and how should his mouth water in anticipation!

But, alas, there is a fly in this precious ointment. We of to-day will then be no longer spring-chickens, and the tenderest will have have grown old and tough, as indeed some of us are now. The most of the teachers of the present day will have turned up their ten toes before that long-looked-for and blessed day shall have seen its sun arise. What good will it then do us? Men will look upon our tombstones, and if they give to our memory a thought at all, it will only be one of compassion that we could not have lived in a modern era, and have been intelligently advanced, and not identified with the dark ages of the nineteenth century. As for the present writer, he hates to be pitied, and he won't be. He scorns the thought of becoming an object of commiseration, and so the dentists of the coming century may go to pot with their added improvements. He is content to belong to the post-pliocenes, and will rest satisfied in the knowledge that we of this generation have made some advancement, and are entitled to a little more consideration than mere compassion at the hands of a boastful and vainglorious race of men, who shall have builded upon the hard-earned erudition and illumination for which we of this age have so earnestly labored.—DR. W. C. BARRETT in *Dental Practitioner and Advertiser*.

THE UNITED STATES AND CANADA.

This friendly and courteous tone toward Americans was indeed a marked and truly pleasing feature throughout the entire series of meetings; but, at the same time, no one could be misled. It was the tone of well-disposed neighbors, desiring to live in kind relations with us—the two peoples working out their problems and their destiny side by side, but separate. On the other hand, very striking and impressive were the tokens of Canadian national feeling, and Canadian love and loyalty to the Empire and to the Queen. Every allusion to the Sovereign, to the new ideal of the “Greater Britain,” to the closer relationship between the Motherland and the world-wide colonies, was received with outbursts of applause that betokened intense patriotic sentiment. The writer was much confirmed in the view, gained in previous visits to that region, that our people generally have no idea of the Canadians—of their resources and their spirit, of their national feeling and national pride, of their attachment to the Empire of which they are a part. Joined to these there is more or less indicated a radical distrust of our methods and ideas, as compared with their own. Union or absorption with “the States” is as far as possible from the Canadian heart; and to one who considers impartially, it seems that a very long time must pass, and great changes be wrought in both countries, ere such an event can be other than a dream. Nor is this a matter for regret, both peoples have their problems and their work to accomplish; both have free institutions; both have energy, courage and faith in themselves and their mission. As friends and brothers each for itself, they can best develop this vast continent on the lines of Anglo-Saxon civilization. An enforced and uncongenial union could have no benefit for either people.—*From the British Association at Toronto, by Prof. D. S. MARTIN, in Appleton's Popular Science Monthly for November.*

NOTES UPON SOME FORMS OF ENAMEL.*

BY CHARLES S. TOMES, M.A., F.R.S.

In a paper published last year in the *Dental Record*, Dr. Paul expressed an opinion that I had been mistaken, probably, in describing the outer layer of the tooth of Lamna and of other Selachian teeth as a layer of “fine-tubed dentine,” and that it had more of the characters of an enamel of the tubular variety.

* Read at the Annual Meeting, held in Dublin, August 17.

This led me to examine into the subject a little more carefully than I had hitherto done; with the result that I came to fully concur with the opinion thrown out by Dr. Paul.

But in the investigation of this and other kindred teeth, some points have come under my observation which seem worth a brief notice. The enamel of Lamna is not much like that tissue which we are accustomed to see; in the first place, in many sections the line of junction between it and the dentine is not so smooth and sharply defined as in most other teeth. In almost all teeth the surface of the dentine is not quite smooth, but it is pitted, as some have thought, to receive the ends of the enamel prisms; and this pitting gives it in section a festooned appearance. Now, in the instance of Lamna and of other Salachian teeth, this festooning is much deeper, so that dwindling processes of the dentine, getting rapidly thinner, do run in a short distance into the enamel.

I presume that this has been seen by Dr. Paul, though so far as I know, he has not described it; but he has put forward the suggestion that the penetration of all tubular enamels by tubes of the dentine is only to be explained by incursions of the dentine matrix, carrying with it the tubes. This explanation, however, I cannot accept, as the results of a very careful investigation of developing Marsupial enamel which I have lately communicated to the Royal Society, show that it is not at all true of that enamel; and, viewed by the light of those researches, I do not think it true exactly of these Selachian enamels, although the appearance there lend to it a *prima facie* support, for one can find plenty of places where tubes run through freely without the least appearance of any dentine matrix going with them.

Hence, although there is undoubtedly a more intimate interdigitation of the enamel and dentine in Lamna than in mammalia, or in most other fish, yet the penetration of enamel by dentine tubes is not to be explained in this way; the tubes which lie in the enamel are a formation derived from the ameloblasts, which join up with the terminations of the dentinal tubes, and hence are, strictly speaking, not properly to be styled dentinal tubes at all. My reasons for saying this will be found in the paper referred to and cannot be further entered upon here, but there are other peculiarities in the enamel of Lamna to which I wish to call attention.

Some little distance into the enamel, one-fourth or one-third of the way through, there occurs a layer of irregular spaces, like interglobular or lacunal spaces, and the tubes continued from the dentine run into these. They are further continued beyond them, right out to the surface of the enamel, where they have open ends, and the tubes are smallest in the middle of the enamel, tapering to this region from both sides. We have thus a sort of combination of the two varieties of tubular enamel, namely, of such as is seen in Sargus,

where the tubes of the enamel enter from the surface and are lost before they reach the dentine ; and of that of a Marsupial, in which they enter from the dentine and are lost before they reach the surface.

This is well seen in some other fossil sharks, in which the outer part of the enamel, with the tubes entering from the surface, forms a very distinctly differentiated layer.

Another appearance, unusual in enamel, is that of a lamination parallel with the surface, and, associated with this, the occurrence of small lacunal spaces, the long axis of which are parallel with the surface.

In watching the action of acids upon a ground section I have noticed that the dentine is attacked with even greater rapidity at first than the enamel, and with the evolution of a great number of bubbles of gas, though the enamel ultimately wholly disappears while the dental matrix is of course left.

Hence it is apparent that the salts of the dentine are far more rich in carbonates than are those of the enamel, though I have not as yet been able to make any analysis of them respectively.

The chief points to which I ask attention are : The interdigitation of the enamel and the dentine ; the occurrence of lacunal spaces in the enamel ; and the peculiar arrangement of the tube system.

But until the development of these enamels has been worked out, no very complete conclusions with respect to it can safely be drawn, so that the present must be regarded as merely a preliminary communication.—*Jnl. Brit. Den. Asso.*

DANGER SIGNALS IN CATAPHORESIS.

Cataphoresis has passed the experimental stage so far as theory is concerned. The electric current will carry medicaments through tissue. Sensitive dentine can be obtunded and excavated painlessly. Pulps can be completely anæsthetised and removed without pain.

These are known facts. There are others unknown to most of us, as for instance, in using it for sensitive dentine may we not injure the pulp by too high voltage, or in ways we know nothing of? We must remember that the pulp has not the powers of recuperation possessed by most of the soft tissues. What voltage is necessary to injure tissue?

Some of these machines furnish as high as sixty volts, which some claim will break up cell life and thus destroy tissue. Of course the makers claim this amount of current is to be used only in obtunding pulp for removal, but right here you must recollect

that the average dentist is not an electrician, and if he attempts to use the current on sensitive dentine and the most minute leak is present, the tooth remains unaffected. He turns on more and more until he is using full strength of machine and the tissues surrounding the tooth are being ruined. Then, how do you know whether you have a leakage or not?

Will the current as used properly destroy germs, or may not septic matter be carried into parts beyond the tooth?

Some of the accidents mentioned have happened and have been reported. Here is another one of great interest and importance. A dentist in this city made an application of arsenic in the usual manner, and at next sitting attempted to remove pulp, but he found it highly sensitive. To hasten matters he applied cocaine with the current and removed the pulp painlessly, but at the next sitting he found the arsenic had been inducted into tissue beyond the tooth. Here was the devil to pay and no funds. Don't say he should have known better—anyone might have done the same thing thoughtlessly.

Never use cataphoresis in a tooth in which any arsenical compound or other injurious drugs have been placed, as the current will carry them through and cause untold trouble.

If pulps die or accidents happen report them promptly to the journals and thus keep others from like errors. Study up on this subject. Act conservatively and report successes and failures.—F. F. FLETCHER, in *Dental Digest*.

SCIENCE BY STATUTE.

In our contemporary, the *British Medical Journal*, for September 4th, we notice the following paragraph:

"THE USE OF POISONOUS SUBSTANCES IN DENTISTRY.—A bill on this subject is to be submitted to the General Court of Massachusetts. The following are its provisions: Section 1. The use of any of the amalgams of mercury as a filling for dental cavities, or the use of red or pink rubber plates which contain mercury or any of its compounds, is hereby prohibited. Section 2. Any dentist who shall violate the provisions of this Act shall be punished by a fine of not less than fifty or more than one hundred dollars, or by confinement for a period of three months in a county gaol, or both, for each and every offence."

Truly this is an astounding example of paternal legislation, or at least of an attempt at it, and it is the more striking as hailing from a country where freedom is supposed to reign paramount. In this country it is difficult enough to procure legislative enactments even upon points on which the whole medical profession is in

entire agreement, and in directions calculated to confer the utmost benefits upon the public, supposing the medical profession not to be all in the wrong, but here the matter in question is in quite a different category.

There are just a few dentists, we suppose, who imagine that mercury in the mouth in the form of an amalgam, or as the coloring matter of red india-rubber, may be capable of exerting its influence upon the individual ; and it is sought, not to convince dentists by adequate evidence that such is the case, but to impose the views of an infinitesimal minority by legislative enactment upon their fellows. It reminds us of the rule once in force in some of the American dental societies, which excluded from their ranks any one who had ever used amalgam. Neither red rubber nor even amalgam are absolutely indispensable in dental practice, and if it could be shown that ill effects followed their use, every intelligent dentist would at once abandon them. But how can the "General Court of Massachusetts" judge of the value of the evidence on such a matter? And even granting that some sort of evidence were forthcoming, what would be thought of a bill to prohibit the use of iodoform or of antipyrin, or of carbolic acid, because all have, beyond a doubt, occasionally produced poisonous effects?

That such an attempt should be seriously made leads us to say a word upon the evidence available against these substances. Some years ago a hospital physician, since dead, brought before the notice of the Odontological Society of Great Britain a number of cases of alleged mercurial poisoning caused by red vulcanized india-rubber plates, all of which had occurred in his own practice. The society, recognizing the great importance of the subject, appointed a committee to collect evidence and report upon it ; the result was that, in response to circulars sent broadcast to dentists, not one single case could be found which bore investigation. The Hon. Sec. of the society personally investigated several alleged cases, and on one occasion travelled a considerable distance to examine what was stated to be a very marked and typical instance of local irritation attributable to the use of red vulcanized india-rubber plates. His report was that all the described symptoms were there, but that there was dirt enough to account for all abnormal conditions, and it was also clearly shown that all the phenomena upon which the physician had relied were equally to be found under black rubber plates, and even under gold plates.

As the irritation appeared most commonly where want of cleanliness was conspicuous, it was not surprising that it was more common under vulcanite plates, inasmuch as the out-patients of hospitals are not on the whole remarkable for their cleanly habits ; besides this it is well known that when plates are not sufficiently long and often out of the mouth, the non-conducting nature of the

rubber may lead to a sort of poulticing of the surface on which it rests, but this is very far removed from mercurial poisoning.

With respect to amalgams, recent investigations show that under some circumstances copper amalgams do undergo disintegration in the mouth, and that free mercury may, in these circumstances, be detected on their wasting surfaces. It does not, however, follow that this free mercury is potent to do any harm; if it passed into the stomach it would probably pass through unaltered, or if acted upon by the acids of the gastric juice would merely amount to a dose or two of calomel distributed over years.

Ordinary amalgams, however, hold their mercury more closely, and do not part with any at ordinary temperatures; they are chemical compounds, though perhaps of a loose kind, and it is almost inconceivable that they can produce any effect, some funny experiments published in America some years ago notwithstanding, in which confinement with pieces of fresh amalgam is said to have been deleterious to the health of cockroaches. In Tomes' "Dental Surgery" there is also an American case quoted as having been set down to mercurial poisoning, which was, on the recorded symptoms, as clear a case of arsenical necrosis as was ever met with.

In England Mr. Jonathan Hutchinson entertains the view that amalgam fillings may, by setting up some form of irritation, be responsible for some cases of leucoplakia of the tongue; but the evidence in favor of this view is very small and it does not appear to have any other adherent, and if amalgam fillings were a cause of leucoplakia that disease would be much more common than it now is. It is equally common where there are no amalgam fillings in the mouth, and where the two do co-exist the distribution of the abnormal patches is not such as to support the idea of any relation of cause and effect. It is safe to say that there is no evidence on record which can for a moment satisfy the requirements of scientific accuracy that mischief has been traced to amalgams, and to borrow again from Tomes' "Dental Surgery," "with the advance of liberal education, which will ensure to the dentist some degree of acquaintance with collateral subjects, such as physics, chemistry and therapeutics, we shall hear no more of this bugbear."—*Editorial in Journal of British Dental Association.*

THE DEATH OF MADAME BERTHAUX.—An interesting figure has passed away from the French dental profession in the person of Madame Berthaux, of Soisson, the wife of a dentist of that town. This lady was seventy-four years old, and had been practising dentistry for forty-five years, and as there were but few women in the profession at the commencement of her career, she may be said to be the *doyenne* of French women dentists.—*Jnl. Brit. Dent. Asso.*

OBSERVATIONS PRELIMINARY TO ORTHODONTIC OPERATIONS.

By W. H. JACKSON, D.D.S., Ann Arbor, Mich.

Before we commence orthodontic operations, the field of inquiry is so very large that I cannot more than touch upon a few of the most important points that bear upon this subject in a short article like the present.

When consulted in reference to these operations, the only aim of the operator should be to do the patient the greatest amount of good with a minimum amount of harm. Should it be found that the harm of an operation would be such as to depress the general system beyond repair, the operation should not be undertaken.

The nervous system is more or less affected in all orthodontic operations, and the amount of irritation will be governed by—

1. The temperament of the patient.
2. The physical condition.
3. The extent of the operation.
4. The density of surrounding tissues.
5. The manner of manipulation.

Owing to the mixing of all nationalities in this country, we have no established types, hence there is an endless variety of temperaments, which are difficult to define.

The nervous temperament and those bordering on the nervous give us by far the most trouble, sometimes giving much cause for anxiety, especially where the patient is young, on account of the susceptibility of the great nervous centre to intense feeling or excitement. Frequently in such cases it is unwise to operate, for serious results are almost sure to follow, as the physical system has not vital force enough to stand up under the intense nervous strain put upon it.

Sufficient attention has not been given to the physical condition of the patient before commencing and during these operations, as the operation may last from a few weeks to many months. If it is hard for a well person to undertake, what must be the effect on a weak, sickly patient?

If there are lesions of nutrition present, preventing proper assimilation for the growth of the tissue to follow the moving tooth, it would be folly to commence operations without first correcting the nutrition.

If there have been periosteal lesions which show a tendency to inflammation of that tissue when injured, or by sudden changes of temperature, resulting possibly in caries or necrosis of the osseous

tissues, it will require the utmost care and vigilance during the whole operation. Sometimes, where the conditions have been severe, it would be wiser not to operate.

Rheumatic conditions contraindicate an operation, especially where they attack the periosteum. Happily these conditions are not often found in patients requiring orthodontic operations.

Scorbutic diseases demand attention, and should be corrected and the system placed in a thoroughly healthy state before attempting to operate, and these diseases are frequently found in the young as well as in older patients.

Uremic diseases should be corrected when present. Elimination is just as essential for health as assimilation, and it would be well if more attention was given to bringing it about.

Phthisical patients should be dismissed at once without operation, as anything that tends to lower the action of the vital forces will have a tendency to accelerate the disease.

Sometimes the hereditary conditions are such that an operation cannot be made without fear of stirring up a sleeping lion that may be difficult to quiet.

Often the character of the deformity is a family trait, and has been handed down from generation to generation. In such cases you can generally feel assured that though you succeed in bringing the teeth into perfect position, they will, as a rule, find their former position, or approximate to it.

Long, severe operations should not be undertaken on patients while attending school, as the mental work takes up so much of the vital force to supply its needs that there is little or nothing for the physical system to appropriate.

After eliminating the impossible and doubtful cases, and correcting, as far as possible, any diseased condition that may have been present, we are ready to consider that which will have to be done with the case in hand. Above all things, do not be in a hurry, but study the case in all its phases, the probability of success or failure; the amount of improvement in the appearance of the patient by the operation.

After having gone thus far, you will be ready to commence the work of accomplishing the desired result.—*American Dental Weekly*.

Dominion Dental Journal

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VOL. IX.

NOVEMBER, 1897.

NO. II.

"OUR BOYS" IN PRACTICE.

One of the best ways to grow old gracefully is to keep in touch with the sympathies and aspirations of the boys. It is not a trait of character which can be made to order. It must be a spontaneous and sincere sympathy, based upon genuine liking. And if one who has grown grey in the service can really feel that he is still "one of the boys" himself, he may win their confidence and friendship without losing any of the dignity due to his age. We have quite a little army of young men climbing the ladder of a stiff education to fit themselves for practice, and every year numbers of them come forth in the full panoply of defiance to disease. Few, if any of us, ever took any good advice we got from our seniors, and it may seem a fruitless task to offer any to the present generation. We were all so cock-sure and positive in youth, and extended any pity we had to bestow upon the fathers of the profession, who seemed to be supremely unconscious that heaven had granted this century and this country a superfluity of young men of genius. It is a curious psychological study to watch the quiet transformation that time and experience bring about, from the self-opinionated young hustler to the subdued and more sensible practitioner of middle age. Those of us who are on the shady side of life's career, and who find more consolation

and wisdom in the softened shadows than we ever found in the glare of the sun, may sometimes wonder why young men are not as eager to seek the advice of experience in regard to morals and ethics, as they are to get it in regard to methods of practice. They who hungrily sit at the feet of professorial Gamaliels, think that on questions of morals and ethics they are fully competent to act for themselves. We have no hesitation in saying of the staff of the Royal College of Dental Surgeons of Ontario, that the moral and ethical example presented to the students has been an eminently praiseworthy feature. The boys may think it a hardship that they cannot smoke in the college buildings. Any experienced lover of the weed, even those who may enjoy their pipe as their best friend, will tell the boys that it would be much better for their health and pockets if they would not smoke at all—while they are students. We need not emphasize the infernal evil of permitting intoxicating liquor at college dinners or entertainments. To the credit of the Ontario school this curse of "civilization" has never once invaded the walls or the welcomes of Alma Mater. Students who frequent the saloons ought to think of their anxious parents, as well as the stain upon their own honor, and dread the first temptation as they would dread the very devil personified. We believe in frolic and fun, and the jolly rough-and-tumble of youthful feeling, and we swear by out-door sports; but we do not want hell or the devil in any of them, and there is no hell on earth so wooing and so likely to lead young men astray as the saloon. Who wants graduates of the saloons for dentists? No matter how skilful a young man may be in his profession, who wants to trust a soaker? Moral asceticism is one of the best additions to any collegiate curriculum. We have reason, as a rule, to feel pride in "our boys" in Canada, and our only object in these remarks is sincerely their happiness and prosperity.

DEBTORS TO THE PROFESSION.

There is too prevalent an opinion among a large number of our dentists, that if they pay their annual dues they cease to be debtors to the profession. Complaints are made that some men force themselves into official life, and are bound to stick there in spite of proof of their incapacity. Those who complain may be prejudiced, and may not know the difficulties of the position. On the other hand, if they "know it all," is it not their duty to come into the open, or, as the boys say, "have it out?"

We know men in every province eminently fitted by superior knowledge and tact to occupy official positions, yet who hold

back, some from shyness, some from pure disinterestedness. "It may not always be a soldier's duty to be disinterested. If by accepting a high command which he has not solicited, he can make it easier for his country to secure the victory, his disinterestedness hurts that which is infinitely more valuable than himself. It is possible to say with truth that no man is indispensable ; but there are a great many who can facilitate success, and when the success is fully admitted by them to be desirable, are they not under obligations to facilitate it? Humility is an admirable quality, but the humility which leaves duties to inferior people needs some justification."

THE VALUE OF OUR LITERATURE.

We believe we are doing our readers a real service when we urge them to spend more money in the literature of dentistry. It is pitiful to find in some offices nothing but old editions of works that are largely obsolete. The publishers have been liberal in their productions in the interest of our profession, and dentists in practice, as well as students, cannot make any mistake in adding to their libraries every reliable book on dentistry, and more than one journal.

From time to time we have reviewed valuable additions to our literature, and we repeat the names of those we have received during the year—so far: 1. Mitchell's "Dental Chemistry." 2. "The American Text-Book of Prosthetic Dentistry," by Dr. Charles Essig. 3. Evan's "Crown and Bridge Work." 4. Burchard's "Dental Pathology and Therapeutics." 5. Richardson's "Mechanical Dentistry." 6. "The American Text-Book of Operative Dentistry," by Dr. Ed. C. Kirk.

Some of our American publishers are under a misapprehension as to the extent of their sales in Canada. One gentleman writes us that he is not aware of the number sold in Canada, but made a guess. To our certain knowledge there were more copies sold in Montreal alone ; while out of the seventy odd dentists and the two hundred students at the college in Toronto, there must have been very many more. Some order direct, but most of the orders go through the depots or through local booksellers. We urge licentiates to encourage students to make these additions to their "list of articles required."

To busy practitioners throughout the Dominion we wish specially to commend Catching's "Compendium of Practical Dentistry," issued annually. The first volume appeared in 1890. The division of selections (all practical) forming the journal include Operative Dentistry, Crown and Bridge Work, Orthodontia, Medicine,

Oral Surgery, Miscellaneous. The volume for 1896 comprised 378 pages and many fine illustrations. It is a *multum in parvo*. Indeed, it is an absolutely necessary work for the dentist who is not tied to the tail of ancient practice, but who wants to know how he can lighten his labor as well as his darkened understanding.

Do not be afraid to be called a book-worm. It is better to be an intelligent book-worm than a conceited despiser of dental literature. Build up your library.

DR. ROBERT CANTWELL.

We had a pleasant visit last month from our friend and former fellow-student, Dr. Robert Cantwell, now of New London, Conn., U.S. The doctor, when like ourselves, just having got out of our teens, was one of the charter members of the "Dental Association of the Province of Quebec," and was one of the seven Montreal dentists who met on the 2nd of September, 1868, to form the nucleus of the Provincial Society. After enjoying a very successful practice, he retired for awhile to engage in a congenial out-door occupation, but, like the salmon which returns to the stream where it was bred, he missed the not unpleasant routine of practice, of which we thoughtlessly often complain. Personally and professionally we can heartily commend Dr. Cantwell to the fraternity of our professional friends in Connecticut.

EDITORIAL NOTES.

THERE are more pins in a full set of plain teeth than in a full set of gums.

THE Aluminum Impression Trays now in the market are light, cleanly, bendable and cheap.

WANTED.—Some one to improve the head-rest of the Dental Chair. Something that will not oblige a patient to bob his head about trying to find the centre.

ONE of the Chicago hotels lets the "privilege" of a resident physician for \$500 a year. The boot-black and the cigar vendor also enjoy "privileges." There should be an opening for a dentist.

QUEBEC Province has another young lady aspirant to the L.D.S., in the person of Miss Ruth C. Aubain, of Montreal, who was one of the five successful candidates out of thirteen for matriculation.

A PROFESSION which treats its law-breakers lightly might almost as well have no laws to break. It is unjust to have one law for an official and another for a private member. The official law-maker is the very worst specimen of a law-breaker. One's example is much more honest than one's high-sounding rhetoric.

A QUACK knows that, as accurate judges of medical and dental merit, the majority of people are fools. He likewise knows that most of them do not know he is a quack. If he is a big enough rascal, he will find big enough fools. If he knows human nature he need not know his business. What a quack knows, is after all worth knowing.

THE Court of Review in Toronto gave an important decision last month in regard to the taxation of private and semi-private educational institutions. The Assessment Commissioner made an attempt this year, for the first time, to tax such institutions as the Dental College, the College of Pharmacy and other institutions, on the ground that they were run on a financial basis and did not come under the exemption clause of the assessment. The Court of Revision, however, refused to allow the assessment of incorporated seminaries of learning.

A STUDENT must learn not only practically how to treat an abscess, what to do with exposed pulps, how to prevent and treat caries, how to treat the diseases of the pericementum, the gums, etc., he must also understand the theoretical reasons for his practical applications. He must know how to diagnose and what to prognosticate. It is not sufficient to know how to make an air-chamber, or how to do without one. He must know the principles of atmospheric pressure and adhesion. Any trained mechanic can make beautiful crown and bridge work, but for its proper adaptation in the mouth, something more is necessary.

IF students want to waste a good deal of time at college, and embarrass their mental efforts in after-life, just let them start into study with a vague knowledge of terms and technicalities. One may fluently use expressions he cannot define, and flippantly roll technicalities off the tongue he cannot explain. It is important, in fact necessary, to get a full and correct knowledge of every term used by lecturers, and not only the definition but the derivation. For that purpose, the very best text-book is a dental dictionary. Before and after each lecture, a student with that one book can illumine many a dark nook in study. A correct knowledge of terms and technicalities fastens more surely to the mind whatever one studies.

WE are indebted to Dr. J. B. Willmott for the following reply to our query as to who was the earliest dentist in Toronto: "So far as I can learn a Mr. Rand was the first dentist here in the early forties. He got acquainted with Lord Elgin, and at his request went to London when Elgin left Canada. Here he built up a large practice. A Mr. Woods was probably next, and was here in 1845; a Mr. Jones from England about 1850. A little later Mr. Slater, still living, a very old man, in Bowmanville I think. He would probably be able to give you early information; he is twenty-two years older than I. About 1855 Dr. French, an American, a graduate of Baltimore; George L. Elliot, John W. Elliot, and a little later W. C. Adams. John W. Elliot and W. C. Adams are still living here and could give you information. Yours very truly, J. B. WILLMOTT."

THE history of one's own life work is inseparable, in a measure, from the history of one's local journalism. Our professional journalism in Canada, like every other literary effort of the kind, has to contend with the keen competition of contemporaries in the United States; and yet we could not use any antagonistic expression advisedly, because there is, perhaps, no more true or pleasant fraternity than that of the pen. All the same, numerous journals published in the United States in the English language are naturally attractive, and we are glad to know that so many of them have Canadian subscribers. Yet, the history of Canadian dentistry cannot be made or compiled outside of the Dominion. Our own journalism grows with us and for us, and we form a part of it, whether we will or not. To those who are active members of the various Provincial organizations the records in the JOURNAL are doubly valuable. Every day we realize more and more the importance of preserving and binding the yearly issues. We repeat the advice often given, "Keep and bind the JOURNAL."

TALKING the other day to a friend of ours, who is the editor of an influential daily paper, we chaffed him on the policy of the press, which, editorially, would not condone quackery and imposture, but which welcomes the very worst form of it in its columns, providing it is paid for as advertising. It struck me as a code of newspaper morals worthy of the political code of a Tarte. In a Socratic way I disputed the justice of such inconsistency to that portion of the public—mostly fools—who got their gospel of dentistry from the advertisements. "Do you believe," I asked, "that the statements and pretensions in the flamboyant advertisements of 'Skin-em and Cheat-em' are true?" "No, I do not," he emphatically replied. "Then you believe that they are lies?"

"I suspect so." "Will you let me insert a letter in your paper protesting against your belief, and defending what you say you believe to be lies?" "No," he answered; "that would be against the principles of the paper." "Well, will you let me insert a letter exposing these lies and giving proofs that they are lies?" "No, that would be against the principles of the paper, too!" "Will you tell me what are the principles of the paper?" "To make dollars for the publisher," he replied frankly. "Is there, then, no way to inform the public of the dangers and damage and imposture of these advertising quacks?" "Yes, a very easy way. You can tell all the truth or all the lies you like in the advertising columns.'

OUR readers will have probably shared with us the gratification we naturally feel, that we have been able to secure so many original communications during the year from the dentists of our own country. To stimulate local talent and stir up local contributors is, of course, one of the main objects of a local journal. To report local proceedings as fully as possible has been one of our objects all these journalistic years. Were that not desirable there would really be no particular *raison d'être* for the existence of a Canadian journal. Our Australian brothers have just come to the fore with a local periodical of their own. It will be thirty years next June since the first attempt was made in Canada—coincident with the federation of the scattered provinces into a Dominion. Great progress, educationally and scientifically, has been made since that date. Ontario alone had a legislative enactment; Quebec followed suit the following year, and since then Nova Scotia, New Brunswick, Prince Edward Island, Manitoba, British Columbia and the North-West Territories have fallen into line. We may include England's first and nearest colony, Newfoundland, in our list, as we expect to welcome it to the confederacy. To every dentist in these provinces the JOURNAL has carried every month whatever inspiration it may possess. It has made many friends, and a few foes. We are grateful to the former, and we, perhaps, ought to be grateful to the latter. Silk purses cannot be made out of sows' ears, and the world of dentistry is big enough for cranks. If we believe that it is not large enough for quacks, we owe them no apology, and propose to do our best to wipe them out, in the interest of the public whom they swindle, more than in that of the profession which they disgrace. The steady support the JOURNAL has had from the pens of its friends, justifies the course we have taken. We began these remarks with the congratulatory statement that our original departments have been well sustained. In this one issue we devote a good deal of space to contributions from other sources.

Reviews.

The Educational Review for the Atlantic Provinces of Canada. St. John, N.B. Monthly. \$1.00 per year.

This interesting periodical always brings to us a suggestion of the bracing atmosphere of the Maritime Provinces. Ably edited and worthy of a place in the homes of the people. It brings us all back a bit to our school days.

Saturday Night. Weekly, \$2.00 per annum. The Sheppard Publishing Co., 26 Adelaide Street, Toronto.

Canada needs a bold and out-spoken press. Toronto enjoys the distinction of having by far the most ably-conducted papers in the Dominion. The partizan of whatever stripe gets his political soup in a strong and substantial dose. *Saturday Night* has a sphere of its own: Literary, musical, artistic, political. The independent criticisms of "Don" and "Mack" are a credit to Canadian journalism. It is the very best paper for the money.

Glimpses of Our Empire. By ROBERT SOULTAR, M.P., Dumfriesshire, Scotland. London: Hodder & Stoughton.

A charming little pocket volume of 143 pages, written by a very practical and unsentimental Scotchman. The list of contents is as follows: Five Hundred Years Ago; A Transformation Scene; How We Got Our First Empire; How We Lost Our First Empire and Gained a Second; How We Gained India; Shall We Lose Our Colonies? The Future of India. 1897. There are four maps showing the origin and the growth of the Empire. The chief features of the book are its sober, common-sense and fair play, and the utter absence of the jingoistic spirit, which has been difficult to suppress this Jubilee year.

The Story of Canada. By J. G. BOURINOT, C.M.G., LL.D. Toronto: The Copp, Clark Co., Limited. 463 pages.

This profusely illustrated and well-written work, by the distinguished gentleman who is the Clerk of the Canadian House of Commons, ought to be in every home in Canada. It is issued as one of the series of "The Story of the Nations." From the dawn of discovery in Canada (1497-1525) to the present progressive period the author carries us in his fluent and fascinating manner, telling an old story with such graphic pen that it seems like a new one. The

illustrations and maps, many of them rare, are worth very much more than the price of the volume (\$1.50). The "View of Louisbourg in 1731," from a sketch in the Paris Archives, is an extended picture, the width of five pages, of great historical interest.

Post=Card Dots.

30. What is the technical term of the poet Burns' "hell o' a' diseases?" (S.)

Pulpitis, inflammation of the pulp.

31. Who gave the name of "gangrene" to the disease now called "caries?" (W.E.)

Thomas Bell, F.R.S. Lond., Eng., in his work on "The Anatomy, Physiology and Diseases of the Teeth."

32. What is the date of the foundation of the *Canada Journal of Dental Science*? (T.)

June 1st, 1868. Succeeded by the DOMINION DENTAL JOURNAL, January 1st, 1889.

33. What is xerostoma? (R.T.)

Dryness of the mouth.

34. What works on dentistry would you recommend a busy man to read?

It is generally "busy men" who read most, and do the most work, even out of office. Read the last editions of the works reviewed in the DOMINION DENTAL JOURNAL this year. Also, refreshen your practice and read "Catching's Compendium of Practical Dentistry," Atlanta, Ga., \$3.00.

35. How old are you? (F.C.)

Between 20 and 90.

36. When did Professor John K. McQuillen die?

March 3rd, 1879, aged 54.

UNQUALIFIED PRACTICE IN FRANCE.—The Correctional Tribunal of Liège has just given a notable judicial decision. A. M. V., a mechanical dentist of this town, was prosecuted by the Provincial Medical Commission for having taken the impression of a tooth, and inserted an artificial one in the mouth of the patient. The defendant maintained that he could freely practise these operations. The Tribunal, conforming to a previous decision of the Court of Appeal, decided that such operations could only be performed by a qualified dentist, and fined the delinquent fifty francs.—*Jnl. Dent. Asso. Brit.*

Miscellaneous.

DANGER IN X-RAYS.

JOSIE'S EAR IS SWOLLEN, HER FACE BURNED, SKIN PEELING OFF AND HAIR FALLING OUT.

So as to better diagnose the dental trouble of which Miss Josie McDonald, of No. 9 West 45th Street, New York, complained, Drs. Nelson T. Shields and George F. Jernignan a month ago decided to have an X-ray photograph taken of the young woman's face.

The picture was taken by Mr. J. O'Connor, and as a result of the exposure to the strong mysterious light, Miss McDonald is now suffering from burns.

A few days after being photographed the skin on the young woman's face, neck, shoulders, left arm and breast, became blistered and finally peeled off.

One ear swelled to three times its natural size, and it is said there has been no hearing in it since.

All the burns were on the left side, although the original trouble was on the right side of the mouth. This was doubtless due to the fact that the left side of the face was nearest to the electric bulb.

The photographic plate was placed against the right cheek, the diseased side.

Mr. O'Connor says that he has taken a thousand X-ray photographs, and a score or more very similar to that made in Miss McDonald's case.

In only one other instance, he adds, was there anything like a burn, and that was not serious.

The first picture taken of the young woman, O'Connor admits, was unsatisfactory, and a second and successful attempt was made. The first exposure lasted eight minutes and the last one thirteen minutes.

Besides the burns, large patches of Miss McDonald's hair have fallen out.

ANY medicament containing oil softens the rubber bulb, and after each using it should be cleaned by removing the cap with needle, and washing with dilute alcohol. If the cap on a Dunn syringe sticks so that it cannot be removed, put in quite warm water for a few minutes, then grasp the cap with a piece of rubber dam. For removing a glass stopper from a bottle or anything where the fingers will not hold, a piece of rubber dam will give the necessary purchase.

Dominion Dental Journal

VOL. IX.

TORONTO, DECEMBER, 1897.

NO. 12.

Original Communications

TREATMENT OF PULPLESS TEETH.

By VINCENT M. MURIER, D.D.S.

When I read of the different methods of treating devitalized teeth, I marvel that we have in our profession, gentlemen who seem to think that there are cases that require so many treatments before bringing a tooth in a condition to fill.

Only the other day, I read of a gentleman who opens the pulp chamber of a tooth in the quiescent state and after thoroughly cleaning out the canals, washes with hot water and bi-chloride of mercury, then packs cotton saturated with spirits of camphor in the canals and leaves it for twenty-four hours. When the patient returns he pursues the same treatment with iodoform. Then the same gentleman goes on to say that when the tooth is ready for filling he uses hot air and goodness knows what not and finally fills the tooth.

For a dentist who desires to linger over his work this method is excellent, or a dentist who hasn't much to do it is the finest kind of a fine treatment. But, when you are in a busy office you must boil things down to the smallest kind of a margin as is consistent with first class workmanship, and get rid of all the horrid smelling remedies which go to make a dental office a young hospital.

The simplest method for treating a pulpless tooth is the method employed by the late Prof. Frank Abbott, the Dean of the New York College of Dentistry. This treatment with one addition is the method I use and have yet to record my first failure.

It is a clean, neat and odorless treatment and a patient would not know they were within ten miles of a dental office as far as the odor of medicine is concerned.

A patient presented herself at my office with a swollen face and

upon examination found an abscess on the apex of the left upper central root ; she had been suffering for ten days, but was feeling much better when I first saw her.

There was a discharge of pus from the gum margin but no fistulous opening ; an ordinary sized cavity was in the tooth. On account of the discharge of pus which had been going on for some days, the soreness had quite disappeared so I was able to excavate the cavity and expose the canal when I removed portions of dead matter and allowed the pus to run down the canal.

I made up a 1-10,000 bi-chloride solution, and right here would say, that by buying John Weyths Tablets, taking one of these tablets and dissolving it in a pint of Krysteid distilled water you get a 1-1,000 solution which can be kept as stock and from it make 1-10,000 whenever you need it. The 1-1,000 solution will last for six months without deteriorating.

Injecting the 1-10,000 solution through the root until the canal and abscess seems clean, and then a fine broach with a little cotton, this to be dipped in a 40° solution of sulphuric acid and worked up and down the canal a few times, then using an alkalic bi-carbonate soda, saturated solution which brings away any foreign substance that might be lying in the root, after which use your bi-chloride again until the cotton shows no stain. Then take a solution of chloride of zinc, forty grains to the ounce of water and inject it in the abscess bag.

This you will find has thoroughly cleaned the canal and abscess bag of all pus and dead matter and now the root is ready for *immediate* filling. No further treatment is required and all other treatments are a waste of good time, both to yourself and to your patient.

The method for filling the root is very simple and very successful as years of practice has proven.

The root is allowed to remain moist. The bi-chloride and oxy-chloride of zinc is mixed to the consistency of cream and pumped into the canal by the use of a smooth broach, care being taken to reach the apex of the root, this is allowed to crystallize when the filling for crown may be put in.

The question might be asked how could you remove the root filling if the trouble should arise. I would answer that you will not have trouble if ordinary care is taken in cleaning the root as the oxy-chloride zinc mummifies any matter remaining in the root.

I know I have left portions of pulp in the root, it being impossible to remove pulp on account of the crooked canal.

In such cases where patients complain of soreness, I apply to the gums over affected tooth equal parts of the concentrated Tr. aconite rad and iodion.

More than four hundred cases have been treated by this method without a single failure and I earnestly recommend all who have not tried this method to begin at once and you will be charmed with the result.

120 West 87th St., New York.

TOO MUCH DRUGGING.

By L. D. S.

During one of the winter carnivals in Montreal a number of independent young ladies from Chicago, none of them over twenty-three, were visited by a young married Canadian woman at the Windsor Hotel. After they were pretty well acquainted and had several jolly days tobogganning, skating and rollicking it generally in the snow, and felt all the better for it, the eldest of the girls asked Mrs. — in a confidential way, "Tell us, Mrs. —, what diseases have Canadian girls got?"

"I don't understand you," said Mrs. B. —

"Well, you know, we've been wondering how the Canadian girls enjoy the winter so immensely. It has put new life into us, and do you know not one of us has taken any of our medicine since we've been here. What medicines do the Canadian girls take?"

"Why, my dear, they never take medicine unless they're ill."

"Well, we aren't ill enough to go to bed, but we've all got something the matter. Haven't Canadian girls got womb complaints too?"

"I never heard of such a thing, unless perhaps in very rare cases."

"Oh, my! rare cases! Why, we've every one of us got something to complain of there, and we've just concluded that we are swallowing a lot of medicines, using tight corsets and not getting exercise, and that's what's the matter."

I might use this as a long text for a short sermon on the use and abuse of the materia medica of dentistry. It is simply preposterous the empirical way in which many dentists use drugs; experimenting without knowledge of the specific action of many of the drugs; using incompatibles, and, in fact, drugging the teeth and gums, like the boy who gave his dog such a thorough washing that when he made up his mind he had given him enough he discovered that he had drowned the dog. I believe in a proper limitation of all the drugs for whatever purpose used in dentistry. If we have one thoroughly effective remedy, why experiment with any that are not known and that cannot possibly any better accomplish the object aimed at?

Take a case of hæmorrhage. One may use powdered tannin and fail to stop the bleeding. It then occurs to him to use perchloride of iron. At once tannate of iron is the result ; an incompatible mixture. Either if persisted in alone might have succeeded ; now combined they are both inert.

I once witnessed a clinic where an operator in treating a blind abscess used peroxide of hydrogen, carbolic acid, oil of gaultheria, oil of pepperment, hot water, chloroform and iodine, all separately and successively. I felt as if they ought to be passed down his own throat in one dose, for the sooner an idiot like that was out of the world the better it would be for humanity.

Let me simply warn young practitioners and some old ones, too, to learn first the action and proper uses of the drugs, and avoid multiplication as much as possible, to learn incompatibles, and to remember that in the teeth and gums nature is often as ready to help as elsewhere. Many of the "complaints" of the oral cavity as well as those of the womb, etc., may be due to drugging.

DECIDUOUS CUSPIDS.

By B.

It is a trite observation, that the deciduous set of teeth are of more than temporary importance ; they have functional duties as well as their successors. One might write voluminous arguments, tracing their growth and development from the earliest period of intra-uterine life, until the normal period for their shedding to show that their importance is not fully appreciated. But I wish briefly to draw attention again to the mischief done to the development of the permanent set by the premature extraction of the temporary cuspids specially. In fact, we need to pay particular attention to the six teeth anterior to the first deciduous molars, but the cuspids, like the two pillars of an arch, are by far the most important in ensuring regularity of development. It will be observed that if these cuspids are prematurely lost, the first bicuspid of the permanent set rapidly travels forward, whether it is developed or not, and the permanent cuspid, whether it is developed or not, has a contracted space for entrance and crowds the centrals and laterals in a way to predispose them to caries. Fortunately these cuspids rarely decay. But by the absorption of their roots, they frequently loosen and fall out, when it would be advisable to retain them. In such cases I have been in the habit of fitting a small plate to the hard palate and letting vulcanite take the place of the lost teeth. The necessary space for the successors is in that way retained, and as they appear the vulcanite can be filed away until the plate can be dispensed with.

IODINE AND ACONITE.

By B.

Of the therapeutical value of this preparation, first introduced to the profession by the late Dr. Frank Abbott, in the treatment of periodontitis and other inflammatory conditions of the oral cavity, I have for many years found nothing to equal the official preparations of these drugs, as follows :

Iodine (St. George's Paint).

Aconite (Fleming's).

Equal parts. The commercial tinctures are, in the large majority of cases, absolutely useless. Young practitioners need, however, to realize that they are dealing here with two dangerous poisons, and remember that it is better to repeat the painting of the part by small quantities, than to saturate the gums to such an extent that the throat and alimentary tract are irritated, and the stomach disturbed. I am led to give this warning on account of several very nearly serious cases witnessed, wherein a young practitioner applied a large swab of cotton, dipped in the mixture, to one side of an affected tooth. Such practice is safe in the use of astringents, as a rule, but it is highly reprehensible with iodine-aconite. In one case the entire mucous membrane of the mouth, throat and tongue was discolored from the excessive quantity used. In another case there were all the symptoms of aconite poisoning, and for several days the patient was under the care of a physician. In the use of poisons in dental *materia medica*, it is wiser to do too little than too much.

Proceedings of Dental Societies.

DENTAL ASSOCIATION OF NOVA SCOTIA.

The first session of the Seventh Annual Meeting of the Dental Association of the Province of Nova Scotia was opened at 9.30 a.m., in the Temperance Hall, Wolfville, N.S., on August 25th, 1897, with the President, Dr. F. H. Parker, in the chair.

The minutes of the last annual meeting were read and passed.

The election of officers was the first order of business, which resulted as follows :—

President, Dr G. K. Thomson, Halifax ; 1st Vice-President, Dr. M. P. Harrington, Bridgewater ; 2nd Vice-President, Dr. M. K. Langille, Truro ; Secretary, Dr. J. A. Johnson, Parrsboro'.

Members appointed to the Dental Board were Drs. A. C. Cogswell, J. A. Merrill, and F. W. Ryan. Members appointed to the Executive Committee—Drs. G. K. Thomson, A. J. McKenna, A. C. Harding, E. N. Payzant, and J. A. Johnson.

The report of the Provincial Dental Board was then read as given below :—

WOLFVILLE, N.S., August 24th, 1897.

To the Dental Association of Nova Scotia :

MR. PRESIDENT AND GENTLEMEN,—The Report of the Dental Board for the year ending August 24th, 1897, is respectfully submitted.

The Dental law has been enforced during the year, and has, with a few exceptions, been respected by the profession and public.

The legislation was not secured too soon. The Dental profession in the various States of the Union have been raising their standards of qualification, and every Province in the Dominion has a Dental law. For years steady enquiry has been made respecting the terms of our Act, and if our law had not been a workable and good one, Nova Scotia would have been overrun with men who could not qualify elsewhere.

It is well within the truth to state that since 1891 about one hundred persons have, by letter or verbally, expressed to the Secretary a desire to practice dentistry in Nova Scotia, who have not chosen to comply with the requirements of the law, and therefore could not practice.

Every facility has been granted for the registration of qualified persons. The case of Cogswell vs. Matheson has, through some legal technicalities, been postponed, but will, without doubt, be tried in the October term of the Supreme Court at Pictou ; other cases of illegal practice have been reported which will be dealt with without unnecessary delay.

DENTAL REGISTER.

The Register has been published in the *Royal Gazette* as the law directs, also in the "Transactions" for 1896, and Belcher's Almanac. Copies of the Transactions containing the Register were sent to every dentist in the Province.

Number of names on the Register August 24th, 1897, seventy-five. No members of the Association have died this year.

Five students have passed the Matriculation Examination as follows :—

Arthur M. Shaw, Middleton, Dr. Crocker, Preceptor.

Albert O. Sproul, Parrsboro'.

Jeremiah S. Clarke, Wolfville, Dr. A. J. McKenna, Preceptor.

H. Ernest Morris, Wallace, Dr. E. L. Fuller, Preceptor.

Clarence N. Davis, Wolfville, Dr. A. J. McKenna, Preceptor.

TEXT BOOKS FOR MATRICULATION COURSE.

Latin for year beginning October 1st., 1897, Virgil, *Æneid*, Book II. Latin for year beginning October 1st., 1898, Cæsar Gallic, War Books, II. & III. Greek for year beginning October 1st., 1897, Xenophon, *Anabasis*, Book V. Greek for year beginning October 1st., 1898, Xenophon, *Anabasis*, Book II. French for year beginning October 1st., 1897, Prosper, *Mérimée*, *Columba*. French for year beginning October 1st., 1898, Voltaire, *Charles XII.*, Books I. & II. German for year beginning October 1st., 1897, Hauff, *Die Karavane*. German for year beginning October 1st., 1898, Hauff, *Das Wirtshaus, im-Spessart*.

MATRICULATION AVERAGE.

All persons who take the Matriculation Examination must, in order to pass, make a minimum total average of 50 per cent. ; and in no single subject fall below 25 per cent.

RECOGNIZED DENTAL COLLEGES.

The Board passes as reputable the list of colleges accepted by the National Board of Dental examiners, also the degree of D.D.S. from Toronto University. Students from any of these Colleges must submit to the requirements of the Dental Law and the rules of the Dental Board of N. S.

1. Baltimore College of Dental Surgery, Baltimore, Md.
2. Boston Dental College, Boston, Mass.
3. Chicago College of Dental Surgery, Chicago, Ill.
4. College of Dentistry, Department of Medicine, University of Minnesota, Minneapolis, Minn.
5. Dental Department, Columbia University, Washington, D.C.
6. Dental Department, National University, Washington, D.C.
7. Northwestern University Dental School, formerly Dental Department of Northwestern University, (University Dental College) Chicago, Ill.
8. Dental Department of Southern Medical College, Atlanta, Ga.
9. Dental Department of University of Tennessee, Nashville, Tenn.
10. Harvard University, Dental Department, Cambridge, Mass.
11. Indiana Dental College, Indianapolis, Ind.
12. Kansas City Dental College, Kansas City, Mo.
13. Louisville College of Dentistry, Louisville, Ky.
14. Missouri Dental College, St. Louis, Mo.
15. New York College of Dentistry, New York City.
16. Northwestern College of Dental Surgery, Chicago, Ill.
17. Ohio College of Dental Surgery, Cincinnati, Ohio.
18. Pennsylvania College of Dental Surgery, Philadelphia, Pa.

19. Philadelphia Dental College, Philadelphia, Pa.
20. School of Dentistry of Meharry Medical Department of Central Tennessee College, Nashville, Tenn.
21. University of California, Dental Department, San Francisco Cal.
22. University of Iowa, Dental Department, Iowa City, Ia.
23. University of Maryland, Dental Department, Baltimore, Md.
24. University of Michigan, Dental Department, Ann Arbor Mich.
25. University of Pennsylvania, Dental Department, Philadelphia, Pa.
26. Vanderbilt University, Dental Department, Nashville Tenn.
27. Western Dental College, Kansas City, Mo.
28. American College of Dental Surgery, Chicago, Ill.
29. University of Toronto, Ont. Degree of D.D.S.
30. Dental Department of the University of Denver, Denver, Col.
31. Department of Dentistry of Detroit College of Medicine Detroit, Mich.
32. Dental Department of Western Reserve University, Cleveland, O.

FINANCIAL STATEMENT OF SECRETARY-REGISTRAR.

HALIFAX, N.S. Aug. 24th. 1897.

Dental Association of N.S., *in acct. with* Frank Woodbury,
Secretary-Registrar.

Receipts.

To amount of Annual Dues to Aug. 24th, 1897	\$79 00
" Matriculation fees	80 00
	————\$159 00

Credit.

Nov. 10th, 1896. By cash paid F. W. Stevens	
Treasurer.....	\$72 00
By cash balance in hands of	
Secretary-Registrar	87 00
	————\$159 00

REPORT OF TREASURER.

WOLFVILLE, Aug. 25th, 1897.

Provincial Dental Board of N.S., *in acct. with* F. W. Stevens,
Treasurer.

To balance on hand Aug. 24th, 1896.....	\$166 43
Nov. 10th. Received from Sec'y of Board....	72 00
	————\$238 43

1896. *Expenditure.*

Sept. 14th.	J. A. Johnson, printing, stationary, stamps	\$3 52
	Y. M. C. A., rent of hall.....	6 00
Nov. 12th.	Prof. Murray, Matriculation Exam. fees	25 00
1897.		
Jan. 7th.	Wm. Macnab, printing, etc.....	21 75
	To exchange on two cheques.....	50
		<hr/> \$56 77
	Amount in People's Bank, Halifax..	\$181 66

NOTE.—Dr. Stevens resigned the Treasurship on account of ill health. The Secretary-Registrar was therefore ordered to prepare the above report of the accounts of the Treasurer.

A number of bills are at present unpaid.

The following will show the actual balance :

Amount in Union Bank	\$181 66
“ hands of Secretary-Registrar	87 00
	<hr/> \$268 66
Bills outstanding ordered paid Aug. 25th, 1897.....	174 90
	<hr/>
Balance in hand.....	\$93 76

This is to certify that we have examined the books, papers and vouchers of the Secretary-Registrar, Dr. F. Woodbury, and the books, etc, of the Treasurer, Dr. F. W. Stevens, and found them correct.

A. W. COGSWELL, } *Auditors.*
G. H. FLUCK,

Halifax, N. S. August 24th, 1897.

The Board recommends that the annual dues for the ensuing year be \$2.00.

By vote of the Board the following resolution, which was passed last year, will remain in force until September 1st, 1898.

Resolution passed that until September 1st, 1898, any students of dentistry who have attended Dental College before passing the matriculation examination may have such time allowed, provided that this does not include private preceptorship.

The Board especially requests that members of the Dental Association report promptly any persons who are illegally practising dentistry in Nova Scotia

Respectfully submitted,

A. C. COGSWELL, *President.*
F. WOODBURY, *Sec'y-Registrar.*

Resolved, That the Report of the Dental Board be adopted. Passed.

Resolved, That Dr. Johnson be paid \$25.00 for his services for 1895-96 as Secretary of the Association. Passed.

Resolved, That this Association extend a vote of thanks to Dr. F. Woodbury for a donation of \$50.00 to the Association. Passed. The meeting adjourned to meet at 7 p.m.

WOLFVILLE, August 25th, 1897.

The evening session opened at seven o'clock with the newly elected President, Dr. G. K. Thomson, in the chair.

The minutes of the morning session were read and passed.

The report of the annual meeting of the Dental Board was read as follows :—

WOLFVILLE, N.S., Aug. 25, 1897.

To the Dental Association of Nova Scotia :—

MR. PRESIDENT, GENTLEMEN,—The Dental Board beg to report from the annual meeting held this date.

The following officers were elected for the ensuing year :—Dr. A. C. Cogswell, President ; Dr. A. W. Cogswell, Treasurer ; Dr. F. Woodbury, Sec'y-Registrar ; Prof. H. Murray, Matriculation Examiner.

The Board recommends that the Dental Association send greetings to the New Brunswick Dental Society and ask them to unite with this Association in a joint meeting next year, together with the profession in Prince Edward Island.

Respectfully submitted,

A. C. COGSWELL, *President.*

F. WOODBURY, *Sec'y-Registrar.*

Resolved, That the resolution of the Dental Board in reference to a joint convention between the Dental Societies of Nova Scotia, New Brunswick and Prince Edward Island be carried out, and that a telegram be sent to the New Brunswick Society (now in session at Fredericton) to that effect. Passed.

Resolved, That our next annual meeting be held in Halifax, if a joint meeting cannot be secured. Passed.

Through the kindness of Dr. McKenna, of Wolfville, the delegates were favored with a most delightful drive through the Gas-pereau Valley and Evangeline Beach, returning in time for the evening session.

Invitations for a drive on Thursday to the Lookoff were received from Drs. Mulloney, Saunders, Lawrence and payzant. but owing to the limited time was postponed, very much to the regret of the visiting delegates.

Resolved, That a vote of thanks be tendered to Dr. A. C. Cogswell for his valuable paper on "Nicotiana," also to Dr. H. Woodbury for his interesting paper on "Cataphorsis."

Resolved, That this Association extend a vote of thanks to the resident dentists of Wolfville and Kentville for the royal manner in which the visiting delegates were entertained. Passed.

The question box was the next order of business, and occupied the remainder of the evening session.

The meeting adjourned to meet at 9.30 a.m.

WOLFVILLE, Aug. 26th, 1897.

The morning session opened at 9.30 a.m., President Dr. G. K. Thomson in the chair.

The principal object of this session was to talk over and try to secure in some way an interest in our annual meetings.

Resolved, That in view of increasing the interest of the annual meeting, each member who expects to attend the next meeting of the Association be requested to bring some other member of the profession along with him, Passed.

Upon motion, the Seventh Annual Convention adjourned.

G. K. THOMSON, D.D.S., *President*.
J. A. JOHNSON, D.D.S., *Secretary*.

CODE OF ETHICS OF THE DENTAL ASSOCIATION OF THE PROVINCE OF NOVA SCOTIA. ADOPTED 1893.

The Duties of the Profession to Their Patients :

Sec. 1. The dentist should be ever ready to respond to the wants of his patrons, and should fully recognize the obligations involved in the discharge of his duties towards them. As they are in most cases unable to correctly estimate the character of his operations, his own sense of right must guarantee faithfulness in their performance. His manner should be firm, yet kind and sympathizing, so as to gain the respect and confidence of his patients ; and even the simplest case committed to his care should receive the attention which is due to operations performed on living, sensitive tissue.

Sec. 2. It is not to be expected that the patient will possess a very extended, or a very accurate knowledge of professional matters. The dentist should make due allowance for this, patiently explaining many things which might seem quite clear to himself, thus endeavoring to educate the public mind, so that it properly appreciates the beneficent efforts of our profession. He should encourage no false hopes by promising success, when, in the nature of the case, there is uncertainty.

Sec. 3. The dentist should be temperate in all things, keeping

both mind and body in the best possible health, that his patients may have the benefit of that clearness of judgment and skill which is their right.

Maintaining Professional Character :

Sec. 4. A member of the dental profession is bound to maintain its honor, and to labor earnestly to extend its sphere of usefulness. He should avoid everything in language and conduct calculated to dishonor his profession, and should ever manifest a due respect for his brethren.

Sec. 5. The person and office arrangements of the dentist should indicate that he is a gentleman ; and he should maintain a high-toned moral character.

Sec. 6. It is unprofessional to resort to public advertisements, such as cards, hand bills, posters or signs, calling attention to peculiar styles of work, prices for services, special modes of operating, or to claim superiority over neighboring practitioners ; to publish reports of cases or certificates in public prints ; to go from house to house soliciting or performing operations, to circulate nostrums, or to perform any other similar acts. But nothing in this section shall be so construed as to imply that it is unprofessional for dentists to announce in the public prints, or by card, simply their name, occupation and place of business ; or, in the same manner, to announce their removal, absence from or return to business ; or to issue to their patients appointment cards, having a fee bill for professional services thereon.

Sec. 7. When consulted by the patient of another practitioner, the dentist should guard against inquiries or hints disparaging to the family dentist, or circulated to weaken the patient's confidence in him ; and if the interests of the patient be not endangered thereby, the case should be temporarily treated, and referred again to the family dentist.

Sec. 8. When general rules shall have been adopted by members practising in the same locality, in relation to fees, it is unprofessional and dishonorable for persons subscribing to such rules to depart from them, except when variations of circumstances require it. It is regarded as unprofessional to warrant operations or work as an inducement to patronage.

Sec. 9. Dental surgery is a specialty of medical science.

Physicians and dentists should both bear this in mind.

The dentist is professionally limited to the diseases of dental organs and the mouth. With these he should be more familiar than the general practitioner is expected to be ; and, while he recognizes the superiority of the physician in regard to the diseases of the general system, the latter is under equal obligations to respect his higher attainments in his speciality. Where this princi-

ple governs, there can be no conflict, or even diversity of professional interests.

Sec. 10. Dentists are frequent witnesses, and at the same time the best judges, of the impositions perpetrated by quacks ; and it is their duty to enlighten and warn the public in regard to them. For this and the many other benefits conferred by the competent, honorable dentists, the profession is entitled to the confidence and respect of the public, who should always discriminate in favor of the true man of science and integrity, and against the empiric and impostor. The public has no right to tax the time and talents of the profession in examinations, prescriptions, or in any way, without proper remuneration.

OFFICERS FOR 1897-'98.

President, Dr. G. K. Thomson, Halifax ; 1st Vice-President, Dr. M. P. Harrington, Bridgewater ; 2nd Vice-President, Dr. M. K. Langille, Truro ; Secretary, Dr. J. A. Johnson, Parrsboro' ; Treasurer, Dr. A. W. Cogswell, Halifax. Executive Committee—Dr. G. K. Thomson, chairman, Halifax ; Dr. A. J. McKenna, Wolfville ; Dr. A. C. Harding, Yarmouth ; Dr. E. N. Payzant, Wolfville ; Dr. J. A. Johnson, Secretary, Parrsboro'. Auditors—Dr. A. W. Cogswell, Dr. H. H. Bigelow.

PROVINCIAL DENTAL BOARD OF NOVA SCOTIA.

Dr. A. C. Cogswell, Halifax, president ; Dr. J. A. Merrill, Halifax ; Dr. M. P. Harrington, Bridgewater ; Dr. A. J. McKenna, Wolfville ; Dr. F. H. Parker, New Glasgow ; Dr. F. W. Ryan, Windsor ; Dr. H. Woodbury, Halifax ; Dr. Frank Woodbury, 137 Hollis St., Halifax, Secretary-Registrar.

NATIONAL ASSOCIATION OF DENTAL TECHNICS.

The fifth annual meeting of the National School of Dental Technics will be held at the Palmer House, Chicago, December 29 and 30, of this year. Its programme will entitle it to even greater success than experienced at any time during its previous years of existence. Its leading paper, from Dr. G. V. Black, on "Instrument Nomenclature, with Reference to Instrumentation," will mark a historical period in methods of teaching the manual of cavity preparation.

D. M. CATTELL, *Sec.-Treas.*
HENRY W. MORGAN, *Pres.*

Question Drawer.

Edited by DR. R. E. SPARKS, M.D., D.D.S., L.D.S., Kingston, Ont.

QUESTIONS.

Q. 38.—May abnormal conditions of the eye result from dental practice?

Q. 39.—Does an operator use both eyes at once? If not, which one?

Q. 40.—Is any ill effect likely to result from operating with artificial light, as electric, etc.?

Q. 41.—Explain the blue line on the gums, as the result of the introduction of lead into the system.

Correspondence.

SHOULD A DENTIST SMOKE?

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—When I was at college in Philadelphia, our Dean used to advise the boys not to smoke; said it would injure practice as well as health. Well, we found out that he was quite a smoker himself. I think myself the use of tobacco ought to be forbidden students.

Yours, F. C. MURRAY.

[The Dean, no doubt, meant the boys to do as he advised, not as he did. There are many good and godly men who smoke; there are many mighty mean rascals who do not. To forbid students smoking in the college or in the office is proper; but how would you propose to enforce the rule in their own rooms? When laws are made too oppressive to one's liberty out of bounds, they are generally better followed in the breach than the observance. "Stolen sweets are always sweeter."—ED. D. D. J.]

OVERCROWDED.

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—When is the overcrowding of the profession to stop? It is a fact that we are all working at high pressure for less than half the fees our predecessors got, and they took life easy. It is common to find dentists open now until ten o'clock at night, and there are some who work on Sundays. One pair of hands cannot do

more than a certain amount of work. Only a certain amount can be well done in a given time. A great deal of this cheap dentistry is necessarily badly done. No one not a fool will give ten dollars' worth for two ; but there are simple people who really think there are such philanthropists in the profession. "Cheap Jack" knows it, and he does not blush when his falsehoods are detected, not he.

Yours, R. M. T.

WHAT IS THE USE ?

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—For twenty years you have been hammering away at quackery, and still we have quackery. What's the use?

Yours, J. T. F.

[For over eighteen hundred years men have been hammering away at sin, and still we have sin. Would you say, "What's the use?" If good men did not hammer away at sin there would be much more of it. From all appearances it is only the "hammering away" at quackery that holds it within any bounds. We shall keep up the hammering to the end, and leave our "hammer" as a legacy to our successor.—ED. D. D. J.]

"OVERCROWDED."

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—At the last meeting of the Eastern Ontario Association at Cornwall, it was argued by some that we are not overcrowded in Ontario. Gentlemen with well-established practices, who even hire assistants to keep everything they can from younger practitioners in the same place, and who have several ways of bringing grist to their own mill, do not talk unselfishly. Now I mean no personal allusion to any one at the Cornwall meeting, as I refer directly to others who talk in the same way and with whom my recent experience may be of interest. I travelled about the province for two months, looking for a fair place to settle. When I called upon one of the gentlemen who says the profession is not overcrowded, and spoke to him about settling in his town, and not far from him, he wonderfully changed his tune. "Come along if you like, but our circumstances here are peculiar ; we are overcrowded here and our fees are low. Why don't you try ——?" Now, Mr. Editor, I'm almost decided to give this gentleman a dose of his own medicine, and if the old-settled practitioners in such a place have cut down their fees, why will they object if I cut down mine?

Yours, D.D.S., L.D.S.

KEEP IT UP.

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—It is a bad sign when we hear a dentist who desires the respect—and the votes—of his confreres, speaking disparagingly of the only dental journal we have in Canada. I cannot understand why a gentleman can feel any personal reflection cast upon him when you go for the quacks and quack advertisers. I know I do not. These men have brought us in Ontario to a pretty low ebb financially, and would ruin us socially, so that by and by we would rank no better than the barber. I see most of the journals published, and none of them have so persistently attacked these enemies of our profession as our own, and I think the publisher deserves our thanks for giving the editor a free hand. I can name several who were converted from the unethical error of their ways by your determined opposition, and I am sure the JOURNAL has a leavening influence in the profession which is well appreciated by the very large majority, however much it may be hated by the few.

Yours, LONDON.

To the Editor of DOMINION DENTAL JOURNAL :

SIR,—Would you consider the enclosed advertisement unethical? I am a young practitioner, a recent graduate of the R. C. D. S., and I find it impossible to pay my expenses unless I make my existence known through the public press. Yours, ———

[We see nothing objectionable in your card. It would be unreasonable to expect general conformity to any fixed form of advertisement, any more than to any restricted line of practice. It would be as intolerant to restrain a young practitioner from modest advertising as to declare it illegal to devitalize pulps or to extract teeth. We know that pulps are devitalized and teeth extracted with as little regard to the principles of conservative treatment, as were a surgeon to amputate a foot on account of a bunion, or a finger on account of a wart. Yet the liberty of the subject in practice has great scope after one has his license. One code of ethics cannot control methods of advertising any more than methods of practice. A voluntary society can ostracise a violator from membership, but there is no legal power to cancel a license no matter how arrant the falsehoods and pretence of the advertiser. These advertisements are like the boomerang, they fly back to their author. We have hundreds of young men like yourself in our ranks in Canada, who are honestly struggling to obtain a reputable practice, and who prefer modest success with honor, to a sensational career of disrepute.—ED. D. D. J.]

To the Editor of DOMINION DENTAL JOURNAL:

SIR,—What do you raise such a row about sensational advertising in dentistry for? Can we claim to be any better than medical men? Some of our highest authorities in medicine and surgery use the local items in the press to report operations. Of course they are got in as "mere locals," but they are ads. all the same. And what sort of ethics do you call it when some doctors have their relations tooting for business in various societies to which they belong, giving the cards of the doctor to members of the committees. I know of several cases where the wives of doctors gave their husbands' cards to Lady Aberdeen. I think you are too hard on our right to push business. Yours, B. S.

[No medical man in Canada advertises after the manner to which you refer. The perambulating corps of physicians who infest the cities for the usual short periods, are not Canadian practitioners, but are "covered" by the license of some speculative Canadian M.D. There is no law to prevent your wife "tooting" for business for you if it is in her line, and she has the official opportunity. Perhaps you are a crusty bachelor; you'd better marry and have a "tooter," too.—ED. D. D. J.]

Abstracts.

Edited by G. S. MARTIN, D.D.S., L.D.S., Toronto Junction.

PACKING pyorrhœa pockets with aristol, quinine or alumnol gives happy results.—*Dental News*.

DR. S. L. WALTON, San Jose, Cal., claims that broken nerve brooches can be easily removed from root canals, after a dressing of twenty-five per cent. pyrozone, applied on cotton, has been left in the canal for a few days.—*Items of Interest*.

PULP CAPPING.—Dr. Atkinson, of Brunswick, Ga., writes to the *American Dental Weekly* protesting against the sacrifice of dental pulps so prevalent in the profession. In his opinion the dentistry of the 19th century has not yet solved the problem of pulp capping as it will be solved in the future. Dr. Atkinson's method is to flow in a paste of iodoform and creasote, covering this with creamy cement.

DR. HASKELL believes that so far as prosthetic dentistry is concerned the instruction should be largely practical and not in lecture form. Even in the laboratory the student labors under great disadvantage in being taught in classes, and especially large classes, with but two or three demonstrators, and they often inex-

perienced men. If the lecturer could spend more of his time in the laboratory of a practical man, his students would learn far more quickly and thoroughly.—*American Dental Weekly*.

WE have often observed our friends working in cramped positions, and their lamentations about press of work causing the back muscles to assume rheumatic aches, are repeatedly heard. The eye and hand should be so educated in the dental operator that he may be able to work in remote and inaccessible cavities by means of his mouth mirror. If this is accomplished these aches, pains and stiffened backs just mentioned will be things of the past.—*Dental News*.

NON-COHESIVE GOLD.—Dr. D. J. McMullen, writing in the *Western Dental Journal*, advocates the use of non-cohesive gold in crown and gingival cavities in molars and bicuspsids. Amalgam is often inserted in these cavities in preference to gold on account of the difficulty of applying the rubber dam and the patient's dislike to a mouthful of rubber. The dam is unnecessary in non-cohesive gold, and by its use a higher standard of dentistry may be maintained, and consequently higher appreciation of the dentist in the community.

DR. EAMES and others have spoken of communion cups. Just compare for a moment the number of people who go to communion with the number of school children who drink in common from dirty cups. We ought all to support, in an effective way, any movement to improve the conditions existing in our school-houses. We ought to attend meetings which give expression to the care of text-books, drinking cups, pencils, etc., for the school is a decidedly more important place to begin our reform than the church.—Dr. WERNER, *American Academy of Stomatology*.

DR. A. C. HART, San Francisco, believes that the secret of preventing decay in teeth lies in the hardening of the intercellular cement substance. The use of tobacco and alcohol has this effect. The use of nitrate of silver for the prevention of decay has been advocated by many, and is certainly very effective, but the staining caused by it is very objectionable. Dr. Hart claims that "The ability to harden albumen and render it unsoluble to the action of bacteria, is the process by which all known bacteriacides act. That they are powerful in preventing decay, just in proportion to their ability to form insoluble albuminates with the teeth and other structures of the body." To prevent decay recurring at the gum margins or around fillings he dries carefully, applies twenty-five per cent. pyrozone for three minutes to thoroughly cleanse, then applies formalin. Solution forty per cent., full strength, for five minutes, then dries thoroughly and melts paraffin and salol over the surface.—*From Items of Interest*.

AMALGAM-CEMENT FILLINGS.—Dr. Cobey, of Washington, in *Cosmos*, says of his method: Mix the amalgam after preparing the cavity to be filled, thoroughly fill this cavity with cement while it is in a "flowing" condition, and as soon as the cement has set sufficiently to offer just a slight resistance to the touch of an instrument, begin to pack small pieces of amalgam in the centre of the cement, forcing it in with small pointed instruments, being careful not to let the instrument penetrate the amalgam far enough to be in contact with the cement. As more amalgam is added use larger instruments, spreading the amalgam until the margins are reached. When the cement has sufficiently hardened to clean away from the margins nicely clear them of cement and continue the amalgam to a finish.

CLEANSING TEETH.—Dr. Albert H. Brockway says in the August *International*, of cleansing the teeth, that few operations are more generally beneficial or more highly appreciated by our patients. In his practice he makes it preliminary to all other operations, as it familiarizes one with the character of the mouth and the condition of the teeth, and also serves as an excellent and comparatively gentle introduction to the more severe operations which are to follow, which is important with timid or inexperienced patients. The artificial teeth of to-day are unnatural in that they are baked to yield a glistening appearance. A diminution of this high glossness is what we should hope to attain. By dipping artificial teeth, prior to setting, into hydrofluoric acid the surfaces become more lifelike. Select the color with reference to the complexion and age of the patient, and never permit the latter to lead you from the path of professional knowledge, rather choose teeth somewhat darker than you first conclude. The teeth always appear lighter when placed in the mouth than they do when on the wax baseplate.—Dr. CARL KNIEWEL, *Danzig*.

DR. LINDLEY H. HENLEY, of Marshall, Texas, sends the following suggestion in relation to obtaining perfect occlusions: "Ninety-ninths of all failures with artificial teeth are probably the result of inaccurate bites. I believe I have a plan which obviates this difficulty. Having obtained an accurate model I cover it with a thin sheet of rubber, and vulcanize it just enough so that it will retain its shape. This plate is partially polished, and my teeth are set up on it and can be tried in the mouth without danger of subsequent change. The teeth are thus set exactly as wanted for proper occlusion and to restore facial contours, and the piece is flaked and fresh rubber packed in and vulcanized to unite the plate with the teeth."—*Items of Interest*.

Medical Department.

Edited by A. H. BEERS, M.D., C.M., D.D.S, L.D.S., Cookshire, Que.

HORSLEY'S ANTISEPTIC WAX.—This preparation consists of beeswax, seven parts; almond oil, one part; and salicylic acid, one part. Professor Keen introduced this preparation into Jefferson Hospital several years ago, and uses it extensively to arrest bleeding from the bone during operation. After removal of a growth from the jaw, as an exostosis or an epulis, the bleeding can be controlled by this application. The wax is of great service in bleeding from diploe or cancellous bone.—*Med. Record.*

EXTIRPATION OF THE GASSERIAN GANGLION FOR NEURALGIA.—Mugnai (*Il Policlinico*, September 1st, 1897) records the case of a woman, aged fifty-two, suffering from incurable neuralgia of the right superior maxillary nerve. In October, 1895, this nerve was excised by the author. For about fourteen months the patient was entirely free from pain; it then returned, not only in the second division of the fifth, but also in the first and third. The author decided to resect the Gasserian ganglion. This was done on January 14th, 1897, by the Krause-Hartley method, viz., temporary excision of the squamous portion of the temporal bone. The operation lasted an hour and three-quarters, and although much collapsed at the time the patient made a rapid recovery, and when seen six months after the operation had no return of the pain, and was better in every way. Sensation had returned over the area of the second and third division of the fifth nerve.—*Brit. Med. Jour.*

CASE OF ACUTE NEUROSIS OF ALVEOLAR PROCESS OF SUPERIOR MAXILLA IN A BABY TWO DAYS AFTER BIRTH.—On September 25th, I attended Mrs. B., aged twenty-eight, in her first confinement, which was quite normal, though tedious. Two days after birth the nurse called my attention to the baby, which had not yet opened its eyes. There was slight chemosis of both eyelids, which I thought might have been due to injury during birth. Next day was requested to examine its mouth, and on doing so, I found the alveolar process of the left superior maxilla much swollen. The day following, there was extensive sloughing, and after having removed the slough with a pair of forceps, I extracted two pieces of bone. The child progressed favorably under treatment until the twelfth day, when an erysipelatous eruption appeared on the abdomen, subsequently spreading to the genitals and nates. The baby died on the fifteenth day, apparently from sapræmia. I have never heard of neurosis coming on so soon after birth. No history of syphilis, struma, etc.—FRED. C. WOOD, L.S.A., in *Brit. Med. Jour.*

TREATMENT OF ULCERO-MEMBRANOUS STOMATITIS.—Marfan (*La Médecine Infantile*, September 1st, 1897), in a clinical lecture, describes under the title of ulcero-membranous stomatitis a case of septic gingivitis, which, by inoculation, had produced ulceration of the mucous membrane of the right cheek. This condition is often called aphthous stomatitis, but must be distinguished from it and from diphtheritic stomatitis. It requires vigorous local treatment to prevent complications such as fistula, noma, osteitis. Chlorate of potash given internally is useless, and the treatment which has been employed for fifty years at the Hôpital des Enfants Malades is to rub in finely powdered chloride of calcium into the affected areas. On the following day the plaques become detached, and healing rapidly follows. If, as but rarely happens, this method fails, recourse may be had to a strong solution of carbolic acid (1 in 10), lactic acid (1 in 3), or per manganate of potash (1 in 300) applied by means of a probe covered with cotton wool. The mouth should be washed out at least twice a day, as well as after food, with boiled water, and the margin of the gums should be touched daily by cotton wool soaked with boracic acid.—*Brit. Med. Jour.*

Tit Bits from the Editors.

IT has been one of the most discouraging features of educational labor on proportional lines that those who know the least of this are the ones ever ready to rush into the arena of professional politics, for a means to cripple the system which the few earnest men have sought to build up and make more and more perfect during the passing years.

IN answer to a beginner's question as to what he should charge for Logan, Richmond and gold crowns, writers in the *Dental Brief* play a good high low game, principally low, however; \$4 to \$15 is the range. If the question is a real one, we would like to say to the asker, that he who puts a gold crown on a front tooth, should receive the pay of a sentence to the penitentiary, provided he is proven sane.—*American Dental Weekly*.

AS we note the ever-increasing number of so-called "dental parlors," and see the columns of the daily papers disfigured by the advertisements of the disreputable practitioners of dentistry, it becomes more and more evident that the evil of dental quackery is rapidly increasing. It cannot be wholly eliminated, for while time lasts and men inhabit the earth, just so long will the unthinking and the credulous fall a prey to those who are unscrupulous and dishonest. So long as is inherent in the human heart the desire to

get something for nothing, the man who offers to meet that want will secure patronage.—*Pacific Stomatological Gazette*.

THE National Association of Dental Examiners [this must not be confounded with the National Association of Dental Faculties, a distinct and useful body.—ED. D.D.J.] has passed the stage of tolerance, and if the State Boards would cease to send delegates to it, one cause of a vast deal of trouble would be removed. As it stands to-day, it is a positive menace to the colleges of the country, and should be abated without any reservations as an obstruction to healthy dental progress.—*International Dental Journal*.

IT is frequently quoted, when some of the products of our dental educational system are under criticism for their imperfections, that "a stream can rise no higher than its source," the implication being that the dental profession is the source of supply for the recruits annually added to its ranks. This is neither true nor is it complimentary. The schools alone are responsible for the character of the product sent out, and no amount of dodging or hedging can alter the fact. But, unfortunately, the advertisement game is like chess or checkers in one respect, *i.e.*, it is always played more brilliantly by the looker-on than by the participants, and as a consequence, much of the criticism of our dental educational methods is of the destructive sort by those who, while condemning the method and its result, offer no suggestions for their improvement; or, still more, demand reforms utterly impossible, in view of the conditions to be met. What is needed, and what will be gladly welcomed by all honest educators in dentistry, are suggestions which can be practically utilized for the improvement of our system. Criticism of the constructive type always commands respectful consideration, and is generally received.—*Dental Cosmos*.

Selections.

THE VALUE OF POST-GRADUATE INSTRUCTION.

By G. LENOX CURTIS, M.D., New York.

Many of you will doubtless recall the fierce attack upon the dental colleges made by the Philadelphia *Medical Times* some years ago, in which the editor (Professor H. C. Wood) stigmatized their degree "D.D.S." as the "badge of a partial culture." You will recall also how the late Dr. J. W. White, who took up the cudgels for the dental schools, showed from Professor Wood's own testimony that they were at least doing what they claimed to do—grounding their students in the principles of dental practice—which, if the

same witness was to be believed, was a good deal more than could be hoped for from the medical colleges of the day, notwithstanding the *Times* held them up as the only proper educators for practitioners of dentistry as of any other specialty in medicine.

The sense in which the *Times* used the phrase "partial culture" was that the dental college could not, *per se*, fit a student for the practice of dentistry, because it did not and could not give him the proper medical knowledge. It is not necessary now to enter into the merits of that contention, but there is a broader sense in which the D.D.S., when granted even after the most thorough course of instruction enforced in any dental college, is the "badge of a partial culture." But it is no more so than is the M.D. of the callow medical graduate, the diploma of the unadmitted law-school fledgling. Each of these bears testimony to the fact that its holder has passed the required curriculum of study. The young dental graduate, for instance, has been taught the general principles of practice, but his time has mostly been occupied in acquiring knowledge, so that when graduated he is merely ready to learn how to apply that knowledge. He is, however, extremely ready, his training having made him apt in the absorption and application of methods. As Dr. Kirk puts it, "The most that has been absorbed when the diploma has been won is a knowledge of the more important principles, a familiarity with typical methods, a limited facility in technique, and, what is equally important, if not more so, the establishment of a habit and method of study giving the ability to readily acquire further knowledge and practically apply it as occasion arises."

The bare statement of the acquirements of the recent graduate testifies his need for further study. He is ready to "begin practice, of course, but who will say he is prepared to cope with the complicated conditions which, common enough in their occurrence, yet test the resources of even the skilled practitioner? Of theoretical knowledge there is no lack. So far as this phase of his qualifications is concerned, the recent graduate can almost surely pass a better examination than his more skilled brother of twenty years' active practice; better fourfold than he himself can when twenty years of active work have made him a shining light in his profession. What he stands most in need of now is the fertility of resource, the keen discernment, the accurate diagnosis, the trained judgment, and, most of all, the manual dexterity which twenty years of active practice will give. How shall he conquer these, so that patients, at the outset of his career shall have as useful service as they will receive at his hands twenty years after? It is most of all in the face of this lack that his D.D.S. is the "badge of a partial culture."

Dr. S. B. Palmer, in a paper published in the *International Dental Journal* for February states the weakness of college instruction when he says, there is not sufficient time spent with students

in manual training to enable them to meet the requirements of prosthetic dentistry ; so when they graduate they have made one or two practical dentures and from twelve to fifty fillings in all."

How is this to be remedied? There seems but one answer—by the post-graduate school. Extension of the term of studentship has done much to correct evils formerly existent in our scheme of education. There is now no lack of theoretical knowledge of the science of industry in the average graduate. His greatest weakness is in the direction of manual dexterity, which, after all, stands very near the first essential to the practical dentist. A fourth year in college, of exclusively clinical and practical work under the guidance of skilled instructors, would meet the difficulty to a large degree ; but even then the student would not have sufficient opportunity to decide certainly what particular line of work he would wish to follow, and as no man can be an expert in all things, a year or two of private work would be required to show him what he really needed, when the post-graduate school would afford the means to supply his wants.

Then, again, there is that large class of men who have entered upon practice without the advantage of a college training. Many of these would be eager to avail themselves of the opportunities for practical instruction to be found alone in a properly-conducted post-graduate school or practitioner's course.

If dentistry hopes to maintain the dignity which it now claims, it must lay out a course of clinical study covering the higher grades of work, to be taught by men having the requisite knowledge and the ability to impart it. By this means the average ability of the profession at large would be sensibly increased. Not every man who is perfectly competent to deliver a lecture before a class of raw students is fit to demonstrate the fine arts of delicate manipulation before a body of graduates and practitioners. These do not sit in open-mouthed wonder as at revelations of an occult science. They are prepared to question whatever is not clear, and they test with more or less keenness the practicality of what is offered. Their instructor must needs know his subject thoroughly, must not merely be "up" in its present development, but must be familiar with the steps by which that development has been reached, even the errors which experience has demonstrated ; in a word, he must be a real expert in the particular branch he essays to teach. Dentistry does not lack for such men. What it does lack is the opportunity and the means to avail itself of their knowledge, their skill, and their willingness to give of their store to the general stock of knowledge, which the general establishment of post-graduate schools would make available. Indeed, in view of the importance of the subjects involved, it may be a question whether attendance upon post-graduate instruction should not be made obligatory upon all graduates.

Men whose good fortune it has been to take a course or courses in post-graduate work are loud in its praises. It is well to read in the journals descriptions of practical methods of procedure; well to hear them discussed in society meetings. It gives one food for thought, broadens the mind, perhaps suggests new ideas. But the moral effect is as nothing compared with seeing every step of the operation, and then under the eye of the instructor doing it one's self. It gives one confidence in himself, a state which always inspires the confidence of his patients.

In these days, for instance, no dentist can be accounted an all-round, finished workman who does not possess a thorough knowledge of crown and bridge-work. Yet it is safe to say not four per cent. of practitioners have this knowledge. Many more think they have it; but they judge from a biased stand-point,—their own work, not that of experts. To acquire this knowledge requires special training, without which the proper practice of this important branch of our work is impossible to the great mass of dentists. Its importance will be the better recognized when we reflect that it is the agency which is rescuing prosthetic dentistry from the low estate into which the introduction of vulcanite plunged it. Were it for no other reason than to assist in this rehabilitation in the esteem of all men of a once-honored department of dental practice, the knowledge of the principles and procedure of crown and bridge work should be universal. Since the introduction of this beautiful work we hear less and less of the one-time Shibboleth, "I do no mechanical work," by which the sheep of the profession sought to distinguish themselves from its goats.

Few men fresh from college are able to construct a bridge properly; fewer still—and this applies also to the mass of practitioners—can do any real surgery in the mouth. The reason why is suggested by Dr. Palmer's remark before quoted. Most of the difficult work, such as surgery, bridge and continuous gum, in the colleges is done by the professors or the demonstrators; so that a practical knowledge of more than the simplest operations is too seldom obtained. In a properly conducted post-graduate school a vastly different rule prevails. It should be manned by competent instructors, experts in each branch such as I have previously described, who would be there to teach, not to practise, to show those sitting under him how to do and then supervise their efforts to do. That is the kind of instruction which is now mostly required to elevate the standard of dentistry. Rightly carried out it will place the schools upon the highest level which can be demanded of them.

To sum up its advantages, the post-graduate school brings the man who seeks it for instruction into close contact with greater men, suppresses his egotism, broadens his intellect, draws forth his

noblest qualities, and inspires his highest ambitions; fosters his inventive faculty and instills into him a reverence for science; in a word, it places within the reach of every man who will learn a practical knowledge of the highest development of dental procedures, and by so much advances the true interests of the profession and of the race.

I have said that it is a question whether post-graduate work should not be made obligatory upon all graduates. I am persuaded that the experiment of a post-graduate school founded upon the lines herein indicated and conducted with an eye single to the advancement of those in attendance, would, by its results, so react upon the moral sense of the profession as to make the post-graduate course, or its equivalent, a necessary preliminary to entrance upon practice.—*International Dental Journal*.

Reviews.

Tin Foil and its Combinations for Filling Teeth. By HENRY L. AMBLER, M.D., D.D.S., Professor of Operative Dentistry and Dental Hygiene in the Dental Department of Western Reserve University. The S. S. White Co., 1897. 12mo., 108 pages. \$1.00.

This little volume is a compilation of all the literature on the subject of tin foil, and should be useful not only to the student but also to the practitioner, no matter whether he has used tin in his practice or not. Dr. Ambler is an enthusiast in the use of this much neglected material, and says in the preface to his work: "It is hoped that what has been said in this volume will enable those who study it to save more teeth and stimulate them to make improvements on the material and methods, doing much better than has been described or suggested."

DR. I. W. FARRAR'S second volume, "Irregularities of the Teeth and Their Correction" (800 pages, 750 cuts), will appear next month. The work is a monumental one, and the author is the leading authority on orthodontia. We shall review the work as soon as possible, and place it beside Vol. I., in the library of the R.C.D.S. Its appearance will be the professional literary event of the New Year.

Dominion Dental Journal

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All Communications relating to the Business Department of the Journal must be addressed to DOMINION DENTAL JOURNAL, Room 97, Confederation Life Building, Toronto, Canada.

VOL. IX.

DECEMBER, 1897.

NO. 12.

A WORD TO OUR FOES.

If one has any grit in his composition, his most helpful "friend" is a "foe." When one serves no selfish interest, and heeds no malevolent aim, the enemies he makes are a stimulus, yet they can do him material harm. They can slander him behind his back; they can hinder his projects; they can stab in the back. But it is true as truth itself that such enemies, whether they are the travelers for dental depots or the principals themselves who do not pull with us, or dentists who are quacks, or who act like quacks, or cranks who can distil no goodness from the zealous work of other people—it is true that such foes in the long run harm themselves more than they hurt those whom they dislike.

One Canadian dental firm—only one—revels in depreciating this JOURNAL. The money of Canadian dentists alone gives the proprietor his bread and butter. We have upon several occasions abstained from referring to some of the "peculiar methods" of the establishment. We have been in possession for some time of facts in this connection, which may yet have to be aired in the courts if the systematic efforts to damage this JOURNAL are not stopped.

Naturally we have other foes, and some are so solidly indifferent that at least they cannot be counted as our friends. No journal is without them; no editor escapes calumny.

SATAN REBUKING SIN.

In an interview Mr. Stead, the editor of the English *Review of Reviews*, had with the notorious Tammany "Boss" Richard Croker, the latter assumed a virtue denied him by his enemies, and incidentally dropped a few trite thoughts which we may aptly apply to the "principles" of the quack and quack advertiser. "The law is that although wrong-doing may endure for a season, right must in the long run come to the top. Human nature is not built so that roguery can last. Honest men must come to their own, no matter about the odds against them. Lying, thieving, calumny, may have their day, but they will pass. Nothing can last but truth. If you put ten honest men into an assembly with ninety thieves, human nature is such that the ten honest men will boss the ninety thieves. 'Honest' John Kelly used to tell me, 'never mind the odds against you if you are in the right. Being in the right is more than odds.'"

"CROWNS AND CROWNS."

A student who had become quite accomplished in the mechanical construction of gold crowns, once came before us to be examined in operative dentistry for his license to practice. He had in the chair a victim whose right central incisor was badly decayed, yet with a live unexposed pulp. We instructed him to treat the case precisely as he would were he in actual practice and regardless of expense. There were a large number of students on the treadmill, and we did not interfere with our genius until the next morning, when he came and asked us to look at his patient. Instead of filling the cavity, or at least *in extremis*, placing on a presentable porcelain crown, he had a glaring all-gold crown, showing its hideous deformity. "What do you think of that, sir? Won't that pass me?"

"As a specimen of dental jewelry and mechanical adaptation it is as near perfection as anything of the kind I ever saw. As an illustration of gross violation of good taste and common-sense it is also quite as perfect. I might pass you on the work as a jeweller, but I pluck you on the work as a dentist. It is good jewelry, but very bad judgment. If you would do an operation like that for a member of my family, I would take an action against you for damages and disfigurement."

Now, on the other hand, there is a great deal of botching going on in crown work. Men who cannot do this work themselves try to get it done by men who never see the patient, and the result in

time is very poor. We have recently examined a number of mis-fitting crowns, to which were due subsequent periosteal disease and loss of the teeth. Cases have come under our observation where pulps have died as the result of the rough treatment by carborundum wheels. We have removed many, the bands of which were so badly constructed that the cementum was a constant mechanical irritant, and the band was a nidus, with all the best conditions for bacteria.

ENCOURAGE OUR BOOK PUBLISHERS.

An extensive experience has convinced us, that the intensely practical character of our profession has prevented very many of our most skilful dentists from cultivating thorough reading of dental literature. It would be an absurd conception, that could imagine an educated physician or surgeon worthy of high rank, who was not familiar with the progress in theoretical medicine and surgery, and who did not keep pace with professional literature. The bane of dental education has been this—that hundreds of men got into its ranks before “book larnin’” was considered as necessary as it is to-day. In the rush, too, of our modern education, it is difficult and often next to impossible to subdue the over-meaning conceit, that the “practice” of dentistry should hold a prominent place, and that the fundamentals, however necessary they are for a pass examination, are burdens that may be relegated to the realms of forgetfulness when they are escaped.

Practical teachers fully realize the supreme importance of technical teaching. A great deal of didactic teaching, especially on prosthetic and operative dentistry, is like pouring water into a sieve. Yet we are confident that experienced teachers of technique prefer to demonstrate to students who know the general principles and science upon which intelligent practice is based. Empirical use of dental drugs; hap-hazard efforts in the treatment of pathological conditions of the oral cavity; mistakes and blunders in practice are largely due to an ignorance of the leading principles, the study of which should precede as well as accompany technical training. From start to finish, education is smoothened for both student and teacher by this knowledge. There is nothing in heaven or on earth that can be learned by guess-work.

The system of dental education in Canada, especially in Ontario, makes this theoretical training compulsory. Our students are obliged to follow precisely the same curriculum as medical students in the subjects taught at the medical universities. They must pass precisely the same examinations and conform to the same regulations in order to make the primary pass for the

degree. Like medical students they are apt to throw aside the text-books of the first two years which are used in the universities. In relation to dentistry proper, this is impossible to one who wishes to keep well informed. The practitioner who expects to make old editions and old education serve his purpose, must expect to drop out of the march of professional progress. Our dental literature is a daily post-graduate course. It pays intellectually and financially to keep fresh with the times. Many who would not retain an obsolete method in practice, stick to obsolete teachers.

The practising dentist owes it to himself and his patients to keep posted on theory as well as practice. The publishers who at great expense supply our profession with its literature should get a good return for their enterprise, and we trust that the new year will infuse new aspirations in this direction into every province of Canada. A fairly complete dental library ought to be one of the useful ornaments of every dental office.

EDITORIAL NOTES.

THE next annual meeting of the Vermont State Dental Society will be held in Rutland, Vt., next March, 16th, 17th, 18th. We propose to give a full report of the proceedings.

THE bound volumes of the DOMINION DENTAL JOURNAL are a valuable adjunct to any Canadian dentist's library.

WE reiterate our advice—carefully read the advertisements and keep up with the times.

YOUNG theologians have a panacea of their own for sin: they start into their first pulpit with the conviction that the devil is now to get his due, and the law and the prophets their true interpretation. One of our young divine friends worried himself for the first year of his pastorate to confirm his conviction that there is no devil; forgetting that the souls of his flock would not be a penny the worse or better for proof positive one way or the other. We have asked many of our readers to give us any advice or suggestion for the better conduct of the DOMINION DENTAL JOURNAL. Much of it has been valuable, and has been acted upon. Some of it is impracticable; some impossible; but it was agreeably received all the same. One new graduate has asked us to publish his ideas on the subject. They may be thought Quixotic, but they are not half as deserving of the reproach as many ideas of our own. It is easy to formulate brilliant plans on paper, but when the vulgar questions of paying the printer and other such trifling obligations are taken into account, the romance of the projects disappear like a

premature snow-flake on a running stream. However, our warm-hearted young friend must speak for himself :

Dear Dr.—My associate, Dr.——, showed me a letter you wrote inviting him to give you any ideas that had occurred to him in any way to improve the DOMINION DENTAL JOURNAL. We both think that the publisher gives us a good deal more than value for our dollar, and that you have succeeded in getting a good deal more original matter than most of the journals which have behind their backs the great interests of large depots. Now, my ideas, the Dr. says, are “wild,” but I’ll give them to you. 1. Enlarge to sixty pages. 2. Illustrate every issue. 3. Publish portraits of all officials of all the provinces, and follow with portraits of all the members of the societies. 4. Get articles from leading writers everywhere. 5. Offer competitive prizes for the best papers on subjects to be named. 6. Personally visit every dentist and get everyone interested.

[We will dream over this, my boy. But we fear that the nearest approach to reality will be that we shall dream we dreamed a dream.—ED. D. D. J.]

“I WISH you’d just mind your own business and not trouble yourself about my methods of managing my own practice. Who appointed you the dictator of dental ethics? If I find I make more money by adopting my present methods what is that your business? I don’t object to your ways of managing your business. You accuse me of imposing upon the public: you say I lie because I advertise the best sets of teeth for \$5. I say you lie if you deny it.”

WE like the out-spoken cheek of this post-card correspondent. One of the best ways to make an enemy of a quack is to attempt his reformation. If you try to show him that he is acting like a fool, he will laugh in your face and simply prove himself a knave. When you try to prove to him that his slap-dash way of doing his work is downright imposture; that, in fact, he steals from his patients quite as surely as the common thief, he thinks he has reason for wrath, though he be caught red-handed. Thieves do not, as a rule, advertise their thieving intentions. What boots it whether the thief steals your purse on the sly or robs you of your money by giving you light weight, departmental goods, or shoddy dentistry? The meanest backyard thief is not a circumstance to the polished dental quack

MESSRS. ASH & SONS (London, Eng.) recommend that in using carborundum wheels, that they should be run at as high a speed as possible. This will, to a great extent, prevent the rapid wearing away of any soft places which there may be in them, and thus tend

to keep them true in use. Although great care is taken in their manufacture, they cannot yet be produced of equal hardness throughout.

THE lawyers seem to have a pretty close monopoly of the power to cancel the privilege of practice for breaches of their ethics. Recently one of the fraternity in Quebec was threatened with the removal of his gown because he publicly advertised that he had money to loan! It is extraordinary that medical men and dentists can publicly advertise the most infamous falsehoods; can even boast in print of conduct which can be easily proven as imposture upon the public, and there seems no redress, except by professional excommunication. And that sort of punishment the imposter will court as it gives him notoriety. An agitation in our Legislatures on this subject must be made some day. Even if unsuccessful, it will be one of the best means of educating public opinion.

WHEN YOU WANT TO BUY ANYTHING in the line of dental goods, look over our advertising pages. You can rely upon the men who advertise in the DOMINION DENTAL JOURNAL. There are quack depots as well as quack dentists, and we exclude both.

ONE WHO TAKES NO INTEREST, or a merely perfunctory interest, in the efforts made to elevate the social and moral tone of the profession, is indirectly an abettor of those who are busy dragging it through the mire.

IT IS A WORTHY AMBITION to desire the respect and friendship of one's confreres.

Obituary.

DEATH OF DR. THOS. W. EVANS.

Dr. Thomas W. Evans, the American dentist, who aided the flight of the ex-Empress Eugenie from Paris in 1870, has died very suddenly. Dr. Thomas W. Evans was born in Philadelphia about seventy-five years ago, and went to Paris in 1846, where he won a great reputation. Since his advent in the French capital, Dr. Evans has attended to the teeth of nearly all the crowned heads of Europe, to say nothing of almost innumerable members of the royal families, except Queen Victoria. He attended Napoleon III. and the Empress Eugenie, and assisted the latter to escape from Paris in his carriage after the battle of Sedan. Dr. Evans's fortune was estimated above twenty-five million dollars.



